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PALESTINE EXPLORATION FUND.

Patron—THE QUEEN.

Quarterly Statement

FOR 1887.

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INDEX.

- Acropolis, 87, 88.
 Akka, the Liva of, 26.
 Akka, Population of Liva, 169.
 Altaic Dialects, 135.
 Amphitheatre, Herod's, 161.
 Arabia Petraea, and the country between
 Egypt and Palestine, 38.
 Arabic Inscription at, 89.
 Archbishop of York's Speech, 5.
 Askalon, 35.
 Boat-shaped Graves, by G. St. Clair, 236.
 Cæsarea, Plain North of, 78.
 Canaanites, Captain Conder, 149, 227.
 Capital, Byzantine, found in Haram Area,
 59.
 City of David, 55, 250.
 Conder, Captain, Notes by, 103, 107.
 M. Clermont-Ganneau, on Hippos, 36.
 " " Notes on Phœnician
 Character and
 on Hippos, 195.
 D'Aubigné, Philip, Tomb of, 76.
 Dome of the Rock, early Arab Historians
 on, 90.
 Eben-Ezer, 111.
 El Tumrah, 26.
 El Yakûbî, 93.
 Executive Committee, Report of, 252
 Greek Inscription at, 90.
 Hippos of the Decapolis, 36.
 Hittites, Criticisms on, 143.
 Hittite Inscriptions, Captain Conder on,
 66, 133.
 Hittites and Etruscans, 136.
 Ibn 'Abd Rabbih, 96.
 Iskanderûna, 30.
 Istakhri, Balkhi, 101.
 Jerusalem, Chronicle, 158.
 " Notes from, 151, 213.
 " Rock tombs below Coptic Con-
 vent, 154.
 " Stones of, 50.
 " Tomb of Philip d'Aubigné, 76.
 Jisr el Medfûn, 29.
 Karnak, List of, 149.
 Kasr Bint el Melek, 88.
 Kh. el Hadeithiyeh, 82.
 Kh. Mansûr el 'Akab, 83.
 Khot el Khankeh, 155.
 Kirjath-Jearim, 111.
 Kubûr el Kerâd, 29.
 Kulat Ard es Suaih, 153.
 Kulonieh, Tomb at, 51.
 Le Strange, Mr. Guy, on the Dome of the
 Rock, 90.
 Lydda and Anti-Christ, by G. St. Clair,
 148, 239.
 Masudi, 100.
 Middoth, 116.
 " on the Measurements of the
 Temple, 60.
 Miyâmâs, 83.
 Mosque el Aksa, by Prof. Hayter Lewis,
 48.
 Mount Tabor, 33.
 Mughârat Umm esh Shkeir, 28.
 Nablûs, Liva of, 34.
 Nahr ed Dufley, 81.
 Palestine Exploration Fund. Its aims
 and scheme, p. 5 ; its funds, p. 6 ; its
 beginnings, pp. 6, 7 ; its martyrs,
 p. 8 ; its officers, pp. 8, 14 ; its work,
 p. 10, 11 ; its losses, p. 11 ; its
 foundation, p. 12 ; the history of
 Palestine Survey, p. 15 ; Captain
 Conder, on his works, pp. 16-20 ; the
 flora and fauna of the country, p. 21 ;
 the architecture of the city, p. 23 ;
 the second wall of Jerusalem, p. 23.
 Perrot and Chippiez, *His. de l'Art.* Notes
 on, by Captain Conder, 107.
 Sakhrâh, View and plan of, 74.
 Samaritans, by Captain Conder, 233.
 Sandy Dunes on the coast of the Mediter-
 ranean, 45.
 Sarcophagi at, 85.
 Second wall, 218.
 Sidon Antiquities, 201.
 " Sarcophagi at, 69.
 Sinai, Peninsula of, 41.
 Tell el Fokhkhar, 3.
 The Exode, by Dr. R. F. Hutchinson,
 239.
 The Tih, 43.
 Tiberias, 85.
 Tower of Edar, 167.
 Tribes of the Desert, 39.
 Twenty-first Anniversary Meeting, 5.
 Wâdy Yasûl, Tomb at, 112.
 Warren, Sir Charles, on Arabia Petraea,
 38.
 Zorah, Rock Altar at, 57.
 Zimmârin, Discoveries at,

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NOTES AND NEWS.

WE are now enabled to publish the interesting and valuable Report of the Anniversary Meeting of the Society, which was held on the 22nd of June last year. The various speakers fully brought out the importance of the work already done, and the nature of the work which remains to be done. The summary of the whole of the speeches may be thus stated :—(1) We must publish what we have in our hands. (2) We must lose no opportunity of making fresh researches, and especially excavations. (3) We must follow up lines already opened up.

We have received two packets from Herr Schumacher, the first of which, on various discoveries about Acre, we publish in this number. It will be at once remarked how extraordinarily full of antiquities must be this country when at every turn of the spade something is laid bare, either a tomb, or a mosaic pavement, or an aqueduct. Herr Schumacher has promised to keep us informed at regular intervals of everything which is found in the country. We hope to organise a similarly regular correspondence in Jerusalem itself.

The other packet received from Herr Schumacher gives an account of a recent visit to the Plain of Esdraelon and the shores of the Sea of Tiberias. He confirms the discovery made eighteen years ago by Mr. John Macgregor of the existence of crocodiles in Palestine, having actually seen one. He thinks, however, that there are very few left. He gives a new instance of the daily destruction of the old monuments—very soon nothing will be left of all the old ruins except the plans and drawings in the “Survey of Western Palestine.” He has found the Jewish cemetery of Tiberias, and has surveyed the extensive ruins of Kusr Bint el Melek, most of which were hidden when Colonel Kitchener visited the place in 1877.

Another and a totally unexpected example of wanton destruction is reported by Mr. Greville John Chester. He writes from Ladikiyeh (Nov. 26, 1886) :—

“The walls of Antioch were regarded as perhaps the very finest specimen extant of ancient crusading fortification. Ascending from the Orontes nearly

perpendicularly to the summit of the beetling heights of Mount Silpins, leaping from crag to crag, joining deep ravines, and enclosing a space of some seven miles, they might be deemed an eighth wonder of the world.

"Now all this is a thing of the past. Within the last few years the hand of the spoiler has been at work, and the whole of the walls and towers are in process of destruction. Every one who wants a hewn stone goes to the ancient walls for it, as the Turkish authorities make no sign of prohibiting the spoliation.

"Lord Stratford de Redcliffe saved the Byzantine walls of Constantinople, which a late Sultan had given to his mother to sell as building materials. Cannot Sir E. White be instructed to save what remains of the grander walls of Antioch, which are still more magnificent, and which have a more than artistic and antiquarian interest as relics of the City where 'the disciples were first called Christians'?"

M. Clermont-Ganneau calls attention to another verification of a theory put forth by himself eleven years ago in a memoir published by the Académie des Inscriptions et Belles Lettres. He then pointed out that the Semitic name corresponding to Hippos (with reference to Hippos of the Decapolis) would be *Sousitha*, which in turn corresponded with the Arabic word *Sousya*, applied by them to a locality not far from the Sea of Tiberias, and he suggested that the word should be looked for, and the place when found examined.

This is exactly what has been done. Herr Schumacher has found in the Jaulân the very name, Sousya or Susyeh, with extensive ruins, in which he sees the ancient site of Hippos.

The "Notes on Arabia Petræa, and the Country between Egypt and Palestine," were made by Sir Charles Warren during the journey in search of Professor Palmer's murderers.

Professor Hayter Lewis points out a remarkable confirmation from the "Travels of Mukaddasi," recently published by the Palestine Pilgrims' Text Society, of the description given by Procopius of the great Church of St. Mary, built by command of Justinian.

The programme for next year's work is contained in a circular, called "Last Year and This," which will be sent to every subscriber. Additional copies will be sent for distribution if required.

The very remarkable capital of white marble found in the Temple Area has been drawn by Mr. W. S. Weatherley, and has been engraved for the present number of the *Quarterly Statement*. A drawing of it has already appeared in the *Illustrated London News*.

The "Memoirs of Twenty-One Years' Work" is now in its third thousand. Subscribers are earnestly requested to use this book as a means of showing what the work has been, and what remains to be done. Copies are given to every

subscriber who wishes to have one, and additional copies can be procured at a great reduction in the price, *by subscribers only*, by writing to the central office.

The Palestine Pilgrims' Text Society propose to issue in the course of next year—

1. The Bordeaux Pilgrim.
2. Arculfus de Locis Sanctis.
3. La Citez de Jherusalem.
4. The Travels of the Russian Abbot Daniel.

The works already issued are—

1. Antoninus Martyr.
2. Sancta Paula.
3. Procopius.
4. El Mukaddasi.

The subscription is one guinea. New members can have copies of works published in previous years at a reduced rate. Members are requested to forward their subscriptions to the Hon. Secretary at the beginning of the year.

Will all the subscribers to the Palestine Fund remember—(1) that it helps the Committee very much if subscriptions are paid in January? (2) Next, that it saves a great deal of trouble if they are paid to Coutts & Co. direct by a Banker's order? and (3) That whenever they are due it saves a great deal of labour if they are paid without waiting for a reminder? The clerical staff of the Society is small, and it is greatly desired not to increase the management expenses, and not to overburden the work of the office.

The following books are now published uniform in size and appearance:—Conder's "Tent Work"; Conder's "Heth and Moab"; Schumacher's "Across the Jordan"; "The Memoirs of Twenty-One Years' Work." Conder's "Syrian Stone Lore" will also be added to the list. Subscribers can have the whole set, together with Hull's "Mount Seir," for 25s. carriage free.

The long-promised List of Old Testament Names has been at length finished, and is to be printed at once. Mr. Armstrong has also prepared a new list of photographs arranged alphabetically according to those Bible names which are illustrated by photographs. This list is also in the printer's hands, and will be ready before the end of January. Those who wish for a copy of either may send in their names.

Mr. G. E. Stewardson, Assistant-Secretary of the British Association, has completed the great Index for the "Survey of Western Palestine." It is hoped to get this ready in the course of the next three months. A circular on the subject will be sent to every one who possesses the great work of the Society.

The income of the Society, from October 8th, 1886, to December 12th, 1886, inclusive, was—from subscriptions and donations, £120 18s. 6d.; from all sources, £365 12s. 11d. The expenditure during the same period was £450 19s. On December 21st the balance in the Banks was £3 45 18s. 9d.

Subscribers who do not receive the *Quarterly Statement* regularly, are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

The only authorised lecturers for the Society are—

- (1) The Rev. Henry Geary, Vicar of St. Thomas's, Portman Square. His lectures are on the following subjects :—
 The Survey of Western Palestine, as illustrating Bible History.
 Palestine East of the Jordan.
 The Jerusalem Excavations.
 A Restoration of Ancient Jerusalem. Illustrated by original photographs shown as "dissolving views."
- (2) The Rev. James King, Vicar of St. Mary's, Berwick. His subjects are as follows :—
 The Survey of Western Palestine.
 Jerusalem.
 The Hittites.
 The Moabite Stone and other monuments.
- (3) The Rev. James Neil, formerly Incumbent of Christ Church, Jerusalem.
- (4) The Rev. George St. Clair, Bristol Road, Birmingham, has resumed his Lectures for the Society. His arrangements, however, will not probably permit him to give any lectures during the months of February and March.

TWENTY-FIRST ANNIVERSARY MEETING.

THE Twenty-first Anniversary Meeting of the Palestine Exploration Fund was held in the Theatre of the Royal Institution, Albemarle Street, on Tuesday, June 22nd, at 3 p.m. His Grace the Archbishop of York, President of the Society, presided, and was supported by Mr. James Glaisher, F.R.S., Chairman of the Executive Committee; Colonel Sir Charles Wilson, K.C.B., F.R.S.; Captain Conder, R.E.; the Rev. Canon Tristram, LL.D.; the Rev. C. D. Ginsburg, LL.D.; Sir George Grove, LL.D.; Mr. John MacGregor, and Professor Hayter Lewis.

The Secretary, Mr. WALTER BESANT, M.A., read letters from gentlemen who were unable to attend, among them being H.R.H. Prince Albert Victor, H.R.H. the Duke of Connaught, who sent a donation of £20, the Duke of Northumberland, Viscount Sidmouth, Sir Henry Rawlinson, Colonel Sir Charles Warren, G.C.B., Mr. Amhurst Tyssen-Amherst, who sent a donation of £21, Mr. Samuel Morley, and Mr. Walter Morrison, the Hon. Treasurer of the Society.

The CHAIRMAN then said: Ladies and gentlemen,—On the 22nd June, 1865, I had the honour of presiding in Willis's Rooms at the first meeting for the inauguration of this Society. It was thought appropriate that, at the completion of twenty-one years, we should meet again, and I am still spared to act as the Chairman, and a good many officers of the Society are still in full vigour and activity, and we wish on this occasion to give a short account of our stewardship in this matter, and to state whether we have or have not fulfilled the purpose for which we were appointed. I think when you shall have heard all of the speakers—for my own task is so general that you should not rest upon what I shall say—you will come to the conclusion that we have not ill or inefficiently fulfilled the purpose for which we were formed. I will remind you of one or two circumstances connected with the formation. First, we are not a religious Society. We are a Society in which we trust that every religious person takes an interest; but it was essential for our work, which is of a purely scientific character, that we should not hoist the banner of any religious body or fraternity whatsoever. We also, as another principle, pledged ourselves that our scheme of work should be carried out on purely scientific principles—that is to say, we should not merely send out travellers who should describe to us scenes and places which have been visited and described many times before, but we should submit all observations to critical scientific tests, and record them as a contribution to the science of the subject. I think that some may be of opinion that in the beginning we were rather too rigorous in this respect, for we seem to have forbidden our agents to hazard any opinion of any kind whatsoever, and instructed

them merely to record the dry facts. I do not see why, if the Society is pledged to a scientific basis, its agents should not be allowed to make, in addition to their scientific results, such suggestions as they may think it right to make ; in fact, we began so to proceed soon after the commencement of our operations, and you will find in the Quarterly Journals and the other publications of the Society that we have not shut the mouths of our agents so as to prevent them from giving their opinions in a matter where a prudent suggestion may possibly become the foundation for scientific research. There was another principle—which was, that we should abstain, as far as possible, from controversy, and that, I think it will be allowed, we have fairly done. These were the three fundamental principles or laws of the Society. Now the sums entrusted to our care have been considerable. I think they amount in the aggregate to about £66,000, spread over the whole twenty-one years. £66,000 to be spent in the survey and examination of one small country is certainly a considerable sum from one point of view. From another point of view, it is rather a disappointing sum. I confess that I should have been glad if the persons who take so much interest in the Holy Land—for I deny, if I may do so, the remark made in one of the letters read by our Secretary, that this is a subject which excites little interest ; I think these persons might have taken a more personal interest, and they might not have said, “ We will leave it to others to do, believing that it will be a very good thing when done ; ” but rather, “ A little contribution will help this Society to complete its arduous work, and that contribution we shall assist to send.” Now, when we first assembled, we made rather light of our work—at least some of us did so—and I suppose nobody dreamed that the work of examining Palestine from end to end would have taken twenty-one years, and then we should have to come forward and say we wanted yet a few years more. I remember saying that we, the English people, by our circulation of the Bible, had virtually made our own the subject of the History of Palestine ; that no nation could compare with us in the activity we showed in the distribution of Holy Scripture, and, I added, the land is given over to us, and we propose to go in and possess it. Those were rather startling words, which have been somewhat lessened by the event. But the history of Palestine is mostly subterranean, and certainly the history of Jerusalem is evidently so. You will see the difficulties that surrounded us. One speaker in the room appealed to our feelings and said, “ Would we in London consent to an officer of the Society burrowing twenty feet below the basement of our house, and what should we feel towards that Society if we had not adequate assurance as to our foundations ? ” Something is wanting still to our knowledge of the foundations of the Temple. That something we know now how to pursue. We shall be able to secure it ; but it will in some measure account for the slowness of our operations that our knowledge has to be sought deep under ground by burrowings and excavations, and by driving shafts under inhabited parts of the city. Now, twenty-one years is a very long time, and a great deal has happened during the twenty-one years. I should like to give you a little fact which

will enable you to measure it—for these great intervals of time require a little help. We were to be favoured to-day with the presence of the Royal Prince who is now, however, at the last moment unable to come. But in a book which he and his brother have recently given us, “The Cruise of the Bacchante,” we read : “We went into the Syrian chapel and the rock-cut tombs called those of Joseph of Arimathea and Nicodemus. Here Captain Conder, with a candle in his hand, electrified us by saying in a low impressive voice, ‘I believe these to be the royal tombs of the Kings of Judah ; and this is the one in which Solomon reposed below the others, as Josephus describes.’” Now the writer of that was a boy of a year old at the time that the Society was founded, and now he is met by the agents of this Society ; he is able to take a part in Palestine exploration for himself, and his observations and reflections do great credit to him ; and Captain Conder, who is here to-day (applause), was there to give him instructions on the subject, and Sir Charles Wilson took him to the tomb rock. The Society is old enough now to have seen him grow into a ripe manhood, and showing a great activity, a precocious activity, I might almost say, in the task of acting as an observant and careful traveller. (Applause.) We have done good if we have educated people in this way, and we must have educated many and many a traveller in the same way, who have never acknowledged what we have done. I should like to point out that during these twenty-one years a great many things have happened which have directed attention more and more to the subject of Biblical archaeology. In the first place, the “Speaker’s Commentary,” with which I had something to do, was projected at the same time and has been since carried to its completion, and very largely circulated. In the second place, the School of Theologians at Cambridge, of which I should like to take Bishop Lightfoot as an example, have been most industrious during these twenty-one years. Then there is the Cambridge Bible for schools, and the Cambridge Greek Testament for schools, and all these things pass into the houses of the people, and to every one of these books we may think we have, at least, been trying to do a good service : we may go further and say we have done good service. (Applause.) There is also a Handbook to the Bible by Captain Conder, and I think no reader of the Bible ought to fail to put it at once upon his shelves, unless he has got it there already. We have, therefore, been taking a great and active part in the growth of knowledge in the Holy Scripture, and whilst we have, as a Society, done nothing to sever ourselves as one religious body from another, the net results must undoubtedly have been to create a much greater interest in the subject of Holy Scripture, and to increase the number of those who love their Bible because they begin to understand it. (Applause.) We have not come here to-day merely to converse about these high subjects ; there is something yet to be done. But, before I proceed to that, I should like to say a word or two upon the subject of those whom we have lost. I don’t know that I could really do it better than by quoting a few lines from this book called “Twenty-one Years’ Work in the Holy Land,” and I will mention that the book, only published to-day, will be at the service

of any subscriber to the Palestine Exploration Fund who may wish to have a copy. On this one solemn page we read : "Amongst those who have actually worked for the Society in the field, we have lost three—Mr. Charles F. Tyrwhitt Drake, the first of these, who died exhausted by fever and asthma in June, 1874, at the early age of twenty-eight, at the time when his knowledge of the country and the people, with a daily increasing grasp of the problems awaiting solution, made him of the greatest service to the Society's work ; the second, Professor Edward Henry Palmer, was taken from the world by the tragic fate which is still in everybody's memory—his loss is one which can never be replaced ; the third is the late Rev. F. W. Holland, Vicar of Evesham, who had made the Sinai Peninsula his own field of study. It was he who carried out the project of surveying the Peninsula, which was executed by Sir Charles Wilson in the year 1869. He visited the country six times. Up to the date of his death, which was in the year 1879, he acted with Sir George Grove as an Honorary Secretary of the Society." We are old enough, not only to number active agents among us, but to have a small roll of martyrs to this great scientific cause. I wish to say a word as to the future. Sir Charles Warren has very important duties elsewhere, and he is unable, on account of those duties, to be with us to-day. Sir Charles Warren it was who projected and determined upon this survey of Western Palestine, which has been happily accomplished. I don't know whether all who are in the room—perhaps the ladies have not, at all events—have paid attention to the difference which a triangulated survey makes in our knowledge. It is a particular method for giving the space within a given triangular area from whence another triangular area is surveyed, and so on to the end, started at what is called the base line. We have many volumes of picturesque travels in Palestine ; but the moment we get a perfectly accurate survey we have an accurate map, and from that time all the scattered notes of travellers can be put into their exact and proper place, and not be treated as the mere story of a traveller in his excursions through the Holy Land. We have a perfect Survey of Western Palestine completed, prepared for the press, and published ; and we have in our pockets a Survey of Eastern Palestine, and when we are able to publish that, then our work will have received its crown and completion—accurate knowledge of the whole of Palestine is secured. I do not say that then there is no further room for the picturesque remarks of the traveller, but going with such a map in his hand, he will be able to bring to an accurate point every observation he takes, and the result will be that his travels will be of very much greater use to those who shall go after him. (Applause.) We have done a great deal of the survey of the Temple area ; we have reduced to the verge of death a good many theories ; we have at least shown that our scientific researches must be carried somewhat further. I do not know that, when we met in 1865, any one person in the room ventured to say—"We will not rest until we have a survey of Palestine as accurate as the English survey carried on by the proper department, which gives us maps of six inches to the mile and an inch to the mile."

It grew upon us, and Sir Charles Warren hammered at it more than any one. Now I am not bound in the least to be non-theological, and if I, in conclusion, speak for a moment on matters theological, I am quite sure that, in such an audience as this, I shall be forgiven. (Applause.) What I have to say is this—and I say it with great thankfulness—we have during twenty-one years been engaged in the survey of a distant land, and nothing but religious interest has carried us there and sustained us there. There are of course antiquarian reasons. Englishmen would go to any country if they knew there were difficulties almost too great to be surmounted; but we have gone there and been assisted by the Government and by the patronage of Her Majesty from the first (applause), because we have a deep interest in the Holy Scripture which we dearly love. My theological question is this: what does all this mean? There is no smoke without fire, and when I see that the most interesting subject on the whole seems to be the study of the Word of God, here and now in this nineteenth century, I ask myself why I should for a single moment despair, because I see springing up around me new studies which sometimes claim an almost exclusive attention? I say when there is all over the country an increasing interest in the Word of God, which brings before us the knowledge of our Lord and Saviour, there must be, therefore, an increasing knowledge and love of that Word, and in that belief I hope all those present will help this undertaking. I, for my part, never will despair. It is my belief that, as at this moment there are more persons engaged in the study of the Holy Scripture than at any former period, so I also believe that never at any time in the history of this country were there more people who in their inmost conscience were ready to take the Word of God for their rule of life, and the Son of God for their Guide and Guardian. Religion, I think, never was more active, and whilst we are ready to admit that this Fund might be better supported, and the moral law of the New Testament might be better observed, on the other hand we ought to be thankful for what we really have, and among the undertakings for which we are thankful I venture to say that you ought to include this Palestine Exploration Fund, which has, in its way, been doing all in its power to make the Word of God better understood. (Applause.) And now for the future—it is only a sentence that I am going to trouble you with. We want to continue our survey; we want to carry out further excavations; we want to publish what we have got, especially the Survey of Eastern Palestine, as far as we have gone, and we want especially to conduct an inquiry into the manner and customs of the people. That is a new departure. We know a good deal now about the surface of the country, but it is in the nature of the case that we are led on from subject to subject, and the next subject that awaits us seems to be to get more knowledge and better understanding of all the peoples who have lived in this wonderful country. You will hear all the details of the various works we have been engaged in. I have simply tried to show you that this work has been large and fruitful, and that it has had a good tendency, and, when I look at the numerous

audience gathered here to-day, I feel perfectly sure that the work will not be allowed to drop, and that the few thousands that will be required for completing that which has been done, will soon be forthcoming. (Applause.)

Mr. JAMES GLAISHER, F.R.S., Chairman of the Executive Committee, who was received with applause, said : My Lord Archbishop, my lords, ladies and gentlemen,—It must be a subject of profound satisfaction to all of us here, as it is to myself, that this meeting, in which we celebrate the twenty-first year of our existence, should have the same President as sat in the chair on the first meeting which called the Society into existence, and I venture to say that no better guarantee of the soundness of our work can be found than the fact that the Archbishop of York is still our President. I must also congratulate the pioneer and the founder of this Society, Sir George Grove, who is here to-day, on the success of the enterprise which he first started. I do not think that my friend Sir George at the commencement thought that the Society would grow to so big a thing or last so long. Yet we have been twenty-one years at work, and a good half of our work is not done yet. We have been at work for twenty-one years : what have we done ? This little book, of which I hope every one will take a copy, tells you in brief. We have made a great and accurate survey, by means of Royal Engineers, of the whole country. This survey has placed the whole of the geography and topography of the Holy Land on a true and scientific and accurate basis. We have discovered a vast number of ancient sites. We have proved the former wealth and populousness of the country. We have enabled students to follow the historical portion of the Bible with accuracy. We have sketched and planned all the ancient monuments still standing in Western Palestine. We have published many goodly volumes full of new and most important discoveries ; and we have a collection of maps on which is laid down the results of our survey. We are not afraid of submitting these results as a glorious return for the money, time, and labour we have expended upon them. Now our first step at the very outset was the very wisest that could have been taken. I think we may give my friend Sir George Grove the credit of that step. It was to ask the War Office for the service of Royal Engineers, officers and men ; and I cannot find words strong enough to express our gratitude to His Royal Highness the Commander-in-Chief for giving us such men as have done our work. You know their names—they are the names of men well known to the world for other work than ours—Colonel Sir Charles Wilson, Colonel Sir Charles Warren, Major Anderson (whose loss we have had to deplore), Lieutenant-Colonel Kitchener who, since he surveyed Galilee for us, has surveyed Cyprus, fought in the front in Egypt, been a Consul in Asia Minor, and a Special Commissioner to Zanzibar, and is now Governor of the Red Sea littoral ; Lieutenant Mantell, now in Egypt, and one of the best Arabic scholars in the army ; and last, though many will put him first, my friend who is, I am happy to see, with us this day, Captain Conder, in himself a whole encyclopædia of Biblical knowledge. (Loud applause.)

A word as to the result of these labours. When Sir George Grove was writing his admirable article on Biblical topography in Smith's Dictionary, what sort of maps had he? Here you have a copy of one—the best at his command.¹ At the time that he commenced those papers that map is a fair specimen of all that was known then of the country. Beside it hangs the new map showing our present knowledge. Compare the two. Look at the two side by side. I without hesitation declare that this great map of ours is the grandest achievement towards the illustration and right understanding of the Bible ever accomplished since the translation of the Bible itself. (Applause.) Take all the facts connected with this map, the drawings of the engineers, their notes, their descriptions—they are full of facts—take them, I say, in connection with that map, and acknowledge that such an addition to Biblical lore has not been made since the translation of the Bible itself. Then we have, besides, this great and valuable series of volumes. Our *Quarterly Statement* has been continued uninterruptedly since March, 1869; nearly eighteen years have passed away since it was commenced. It is full of the most interesting papers; and, just imagine this, ladies and gentlemen, that all the money we have paid for contributed articles to this journal does not amount in all, during all this time, to more than £50. (Applause.) The earnestness and zeal of the contributors to these volumes have been such that they have never wished for payment. Captain Conder, we all know, has done an enormous amount of this work, but it is fair to say that this earnestness is typical of every one who has been engaged upon our work either at home or abroad. (Applause.) Sir Charles Warren it was who went down deep under the ground, and it is to him we are indebted for proving the magnificence of the old buildings of Jerusalem. Before, there was supposed to have been exaggeration in the descriptions which survive; now, it is known that the facts justified the language of Josephus and others. (Applause.) I should like also to acknowledge our obligations to Laurence Oliphant, to Guy Le Strange, to Merrill, to Schick, and many others, who have all assisted us; and the more they work upon Palestine the more earnest are their feelings, and it is to this more than to anything else that we refer the success that has attended our labours up to the present moment. There have been a painful number of deaths since first we began—Palmer, Drake, and Holland have gone from us; of the Members of our Committee there have been a great many deaths—Archbishop Tait, my old friend Bishop Wilberforce, Bishop Jackson, Emmanuel Deutsch, Professor Donaldson, Lord Derby, Dean Howson, Lord Dunraven, Dr. Keith Johnstone, Sir Antonio Panizzi, Lord Lawrence, Sir Moses Montefiore, Lord Ossington, Dr. Norman McLeod, Dr. Pusey, Earl Russell, Sir Gilbert Scott, Mr. W. Spottiswoode, Lord Stratford de Redcliffe, Lord Shaftesbury, Lord Strangford, Sir William Tite, Lord Zetland, and, last but not least, Mr. Vaux. To enumerate these is like giving a list of Victorian worthies. All of these were members

¹ There were hanging on the wall two maps, one an enlarged copy of part of the best map of Palestine in 1865, the other a copy of the same portion from the new map.

of the General Committee, who did good work in their time. There are so many speakers, that I must now conclude. But before sitting down I should like to mention some of the works on Palestine which, though not ours, have been stimulated by our work, and have appeared since we began our labours :—Warren's "Underground Jerusalem," his "Temple of the Tomb;" Palmer's "Desert of the Exodus," Tristram's "Land of Moab," Ginsburg's "Moabite Stone," Burton's "Unexplored Syria," and his "Land of Median," Fergusson's "Temples of the Jews," Conder's "Handbook to the Bible," Besant and Palmer's "History of Jerusalem," Lady Burton's "Inner Life of Syria," Oliphant's "Land of Gilead," Merrill's "Eastern Palestine," Trumbull's "Kadesh Barnea," Conder's "Judas Maccabæus," Wright's "Empire of the Hittites," Drake's "Literary Memoirs," and the Transactions of the Society of Biblical Archæology. All these have appeared since this Society was founded twenty-one years ago.

Sir GEORGE GROVE, who was received with applause, said : My Lord Archbishop, ladies and gentlemen,—It is with very strange and mixed feelings that one comes back to a subject which at one time was absolutely absorbing, but from which, owing to circumstances and the pressure of other occupations in a totally different sphere, I have been entirely cut off for many years : but, at the same time, it is most satisfactory to think that the work which one helped to start has been so well carried on, and has so thoroughly justified its existence. There are plenty here who will tell you what the Society is now doing, if indeed anything is wanted beyond the evidence of that remarkable map. I can only say a few words about the past and the origin of the Society. Of course the Fund is a part of the great movement for the investigation of the East and the Bible which came into prominence thirty or forty years ago, and of which Stanley's "Sinai and Palestine," and Fergusson's works on "Indian Architecture," were principal features, and which is now being extended by the Egyptian Exploration Fund, to which I heartily wish success. But if the Society can be said to have had an actual origin or seed, I think I may name a remark of the late Mr. Fergusson to me during the construction of the Assyrian House at the Crystal Palace in 1853. He lamented that there was no complete concordance of the proper names of the Bible—Old Testament, Apocrypha, and New Testament. This was enough to lead to the production of a complete manuscript concordance, which again proved of most material service in the preparation of Dr. W. Smith's "Dictionary of the Bible," itself a remarkable monument of the movement; and it certainly was the discovery of the vague and casual state of our knowledge of the country by those who had most to do with that Dictionary that caused the actual formation of the Fund. The rest is *littera scripta*. If, however, any evidence is wanting as to the wide influence of the Fund, I venture to point to the remarkable book which has recently appeared—the "Log of the Bacchante." The Palestine section of that Log would be remarkable anywhere, and from any hands, however learned. I ask any one here present if I am not right in saying that it could not have been

produced fifty years ago? Jerusalem would not then (as Napoleon said) have come within the base of operations of the travellers, and it is certain that the places visited could not have been viewed by non-professional (clerical) persons with the knowledge and sentiments with which they are described in the Log, and which now appear as natural as they are just and accurate.

When one looks at the list of the promoters of the Fund who took part in the first meeting this day twenty years ago, it is mournful to see what gaps death has made in it—Archbishop Tait, so wise and cautious, and at the same time so cheering; Dr. Pusey, speaking from his cell at Oxford with all the mysterious weight of a recluse, and at the same time in a most practical manner—for it was he who first used the popular word “Ordnance map” in reference to our researches; George Williams and James Fergusson (if I may venture to put together two creatures more antagonistic than fire and water, and whom yet this Society included within its arms), the stately Murchison, and the familiar Vaux. But there is one person more cheering, more practical and popular, more active, more fiery than all of us put together, who, whatever share he may have had in the actual mechanical formation of the Society, was more than any one else its real founder, since it was his knowledge, his enthusiasm, his sympathy, his wisdom that inspired us all. I need not say that I allude to Arthur Stanley. My Lord Archbishop, it is now five long years almost to a month since he was removed from us, and yet I cannot get accustomed to the idea of his death. Not a day passes that I do not find it more impossible to forget that the liberal section of the Church of England has lost its chivalrous leader and champion, and that I have lost the most affectionate, sympathising, indulgent friend that any man ever possessed; nor can I cease to regret that my work at the Royal College of Music prevents my endeavouring to write his biography. What he committed to me has passed into perfectly able and trustworthy hands; but still they are not my hands, and my friend is thus still farther removed from me.

“Known and unknown, human, divine;
Sweet human hand and lips and eye;
Dear heavenly friend who cannot die,
Mine, mine for ever, ever mine.”

It is a relief to turn away from those we have lost, and look at those who still remain: at you, my Lord Archbishop, always glad to counsel and help; at our venerable Chairman, Mr. Glaisher; at Wilson, always a tower of strength, and Warren, of whom in his new capacity it is impossible not to feel a little afraid; and Conder, and Hayter Lewis, and last, but not least, our indefatigable Secretary; and here (as everything has its humorous side) I may just allude to the fact which Stanley would have so enjoyed, that while the first Secretary of the Fund was the chief officer of the Crystal Palace at Sydenham, the present one is the most popular novelist of the day.

And now, ladies and gentlemen, before I sit down, allow me as a

layman to say one or two words in conclusion on the purpose of the work in which we are all engaged, and which so far has progressed so satisfactorily. What is it all for? It is all for the investigation of the greatest document which the world contains. In no country is the Bible more valued than in England. No doubt by some it is inaccurately valued, with a reverence that partakes of the nature of superstition, and truly there is much in the Bible to excuse such an affectionate mistake. But though the Bible has many a charm in it, it is much more than a charm. It is the oldest, the most reasonable, the most delightful document in existence; but whatever was its origin, it exists under the same conditions as other books, and by the aid of such researches as ours and by the criticism so constantly and remorsefully applied to it—and which is more welcome the more severe it is—all the inaccurate notions about it are being gradually stripped off, and it is proving itself to be not a *caput mortuum*, but to be more and more living, more consistent, more human and divine, and will every day get more real hold on men, and prove itself the best, truest, and noblest book in the world.

Sir CHARLES WILSON, K.C.B., who was next called upon to speak, was received with applause. He said: My Lord Archbishop, ladies and gentlemen,—Before saying a few words on the subject allotted to me, I will, with your permission, mention a name which I am sure has been unintentionally omitted. It is that of Dr. Chaplin. (Applause.) It was Dr. Chaplin who, by his unremitting kindness and thoughtful care, rendered the survey of Palestine possible, for he not only tended us, the explorers of Palestine, when we were ill, and gave us the best advice in all sanitary matters, but he unreservedly placed his great knowledge of the country and of the people at our disposal. Dr. Chaplin has not only done this, but he has communicated several important papers to the *Quarterly Statement*, and has always done his utmost to further the objects of the Fund. I should like also to say a word of a brother officer of mine, Lieutenant Mantell, R.E. (applause), who accompanied Captain Conder in his last expedition to the east of Jordan; he is now serving with the Egyptian army, and promises in a few years to become one of the best Arabic scholars in this country. His progress in Arabic has been very rapid; only last year, whilst he was being examined by some of the learned Sheikhs of the El Azhar Mosque, a question arose on some obscure point of Arabic grammar. Lieutenant Mantell maintained his point; the examination was adjourned, and when the Sheikhs reassembled they were obliged to confess they had found their equal, if not their master, in the young Engineer officer. (Laughter.) Then again there is the distinguished geologist, Professor Hull, F.R.S. (applause), who returned not very long ago from his expedition to the Arabah and the Dead Sea, and who has since given us an authoritative opinion on the origin of the Dead Sea basin, and the geological features of the country.

My special duty, however, is to point out to you the great impetus that has been given to Palestine research in this and other countries by

the formation of the Fund. The first result was the Ordnance Survey of Sinai, which was made during the winter of 1868-9, and settled the rival claims of Jebel Musa and Jebel Serbal to be considered Mount Sinai in favour of the former. In 1870 the French sent out two staff officers, Messrs. Mieulet and Derrien, to construct a map of Palestine; they did a good deal of work in Galilee, but were recalled to France on the outbreak of the war with Germany. Next in order is the American "Palestine Exploration Society," which was constituted at a meeting held in New York in October, 1870; the Society soon got to work east of Jordan, and the survey made by Lieutenant Steever, Topographical Engineers, is quite equal in accuracy to our own; but, unfortunately, it was only of a very small district. The Society did other good work, and one of their explorers, Dr. Selah Merrill, has published valuable works on the country east of Jordan and Galilee in the time of Christ. To our great regret the active field work of the American Society came to an end, and it has thus fallen to the lot of the English Fund to complete the survey of the trans-Jordanic countries. Another Society, resulting almost directly from the establishment of the Fund, is the Society of Biblical Archaeology, which came into existence in December, 1870. Your present Treasurer, Mr. Walter Morrison, is now the President of the Society, and he and I have been members of it from the commencement. The action of this Society led also, indirectly, to the expedition of the late Mr. George Smith, which obtained such important results in the valleys of the Euphrates and Tigris; and I may perhaps mention that much attention has been paid by the Society to Hittite inscriptions. Public interest in these inscriptions was first aroused by the action of the Palestine Exploration Fund, which eventually resulted in the transmission to this country of casts of the celebrated "Hamath stones," obtained by the tact and prompt action of the Rev. W. Wright, D.D. Further exploration and investigation has, I need hardly remind you, shown us that the Hittites were a powerful people, whose influence extended at one time over Syria, Palestine, and Asia Minor. Next in order is the German Palestine Society, which held its first meeting in 1870, and commenced publishing its annual Journal in 1871. The Journal contains admirable critical papers on all matters relating to Palestine, and the Society has also carried out important excavations at Jerusalem, of which Dr. Guthe, who conducted them, has published an interesting account. There is also the Russian Palestine Society, founded some two years ago, and I think it is pleasant to feel that the most cordial relations exist, and have always existed, between our own Fund and the various kindred Societies which have been formed in foreign countries as well as in England. Another Society is the "Egypt Exploration Society" (applause), which has already done such good work by its excavations at Pithom, Zoan, Tahœanhes, and Naukratis. The impetus given to research has extended to Asia Minor, where an American explorer has recently settled the vexed question of the site of Lystra by the discovery of an inscription bearing the name of the town. There is yet another Society with which I am closely connected—the Palestine Pilgrims' Text Society,

which has been started with a view of supplying English readers with translations of the earliest records of visits to Palestine and Jerusalem during the Christian era.

I should like also to draw attention to the great change that has taken place in the condition of Palestine, and of the East generally, since the formation of the Fund. I well remember that in 1864, when I first went out to survey Jerusalem, people in England prophesied all kinds of disaster, and thought I was undertaking a useless journey. They considered it almost impossible for a Christian to survey a Moslem town, not under a Christian ruler, with that accuracy which characterises the Ordnance Survey plans of English towns; and I recollect that the late Mr. Hepworth Dixon told me when I started, that if I went about by myself in the streets of Jerusalem, especially after dark, I should infallibly get my throat cut. (Laughter.) There were some black Dervishes in the Haram who were supposed to be very bloodthirsty and dangerous; but I am glad to say we left Jerusalem without having had a serious difficulty with any one, and the black Dervishes not only became our friends, but assisted us to measure their own sacred buildings. (Applause.) Then, again, as regards Palestine itself: when I first went up the country, the great plain of Esdraelon was periodically raided by Bedonin from the east of Jordan. The district was so disturbed that it was said that a man rarely reaped what he sowed on the great plain. This is all changed; the plain is now well cultivated, and in harvest time is a waving mass of grain. The whole country is much more settled; a new town has sprung up without the walls of Jerusalem, and each year Palestine is traversed by an increasing number of tourists; perhaps, however, what struck me most during a visit to the country in 1882 was the great increase in planting, and consequent extension of the vineyards and olive groves. (Applause.)

The exploration of Western Palestine is now, I think, passing into another phase. We have still to survey Eastern Palestine, but in the west we need the services of gentlemen who, like Mr. Laurence Oliphant, reside in the Holy Land, and are ready, on the spot, to note accidental discoveries. The plough, the spade, or an unusual fall of rain frequently bring to light ruins, inscriptions, tombs, and small articles of great value, which would be completely lost if not noted at the time, and Mr. Oliphant and others have recently collected much valuable information in this manner. (Applause.) I should like also to refer to the question of excavation. I am sorry to say that, except at Jerusalem, no extensive excavations have been carried out in Palestine. There are places, such as Capernaum, Jezreel, and Samaria, that cry aloud for excavation, and I wish that some of the wealthy men of England would follow Dr. Schliemann's example and devote some portion of their superfluous wealth to the exploration of these places. They would be amply repaid for their expenditure. (Applause.)

Captain CONDER, who was next called upon, and was received with applause, said: My Lord Archbishop, ladies and gentlemen,—It seems

very strange to me to think that this is the twenty-first anniversary of the Palestine Exploration Fund, and, still stranger, that for fifteen years I should have been connected with the Society. That time has been a time of good and honest work to every one connected with the Society, and although we have to lament the loss of many distinguished members of the Society who have died, we must not regard the Society as being in its old age, because it is only commencing a vigorous youth. I should like to call attention to-day to the three reasons why this Society has been a success, which cannot be denied. The first reason, of course, has been the stamp of men who have started the Society, and who have worked for the Society. The second reason, I think, has been what we have *not* discovered, and the third has been what we have discovered. (Hear, hear.) The names of various distinguished members and workers for this Fund have been mentioned, and as they are mostly my seniors, it would be presumptuous on my part to say much about them; but there are one or two to whom attention should be called. In the first instance Sir George Grove, whom we all regard as the father of the Society. (Applause.) It was my duty to investigate all that he has written on the subject; and what we have to say to-day is that, although we have added considerably to the information that Sir George Grove collected, we have found very few instances where it is necessary to alter or correct his work. That which he told us was known, was known; and what was not known we have, to a great extent, succeeded in discovering. With regard to Sir Charles Wilson and Sir Charles Warren, they possessed while in your employment the same abilities which have made their names known to all England at the present day (applause), and I have felt what an advantage it was to myself, personally, to be associated with men of that calibre. Mr. Glaisher I have to thank for steady encouragement when working for the Society. Mr. Morrison has been one of the most important members of the Society, and I have also to thank him for the assistance he gave to the execution of the survey; for if it had not been for his guarantee at the back of the Society, our survey might several times have collapsed for want of funds. Mr. Walter Besant, who has been my friend for many years (applause), is, I think, one of the greatest pieces of good fortune that the Fund has had. He has kept us together, and his good temper and patience and help have led to the publication of all the work which was done in the field. Dr. Chaplin has already been mentioned, and I am sure that no one connected with the Society owes more to him than I do. Of my two colleagues, Kitchener and Mantell, all I can say is I hope I may work with them again. I do not think a more hard-working and able member of the Society exists than Lieutenant Mantell. One among the officers of the Royal Engineers whom we have to regret is Major Anderson. It was due to him on many occasions that I was able to take the right course, and I felt his loss extremely. The youngest member of the Society, if I may take the liberty so to call him, is H.R.H. Prince Albert Victor of Wales. His book is now in your hands, and I can bear testimony to the way in which His

Royal Highness worked up every night the experiences of the day, and to the general interest he showed in all subjects connected with Palestine. (Applause.) There are two other names connected with the Society—I mean Sergeant Black and Sergeant Armstrong. (Applause). We certainly ought not to forget them. First of all, the map you see on the wall is their handiwork. They drew the map and did the calculations, and the greater part of the manual labour of the work was theirs. But, in addition to that, they were not only my very good friends, but men on whose common-sense and hard-headedness and wisdom I felt I could always rely. (Applause.) You can hardly appreciate how the success or disaster of a party may depend upon a momentary expression of impatience on the part of one member of that party. If I had had men less cautious in dealing with the peasantry, and less prudent in pursuing their inquiries, I think we might have been brought into dangers which, for the time, would have put an end to our work. I select the names of Sergeant Black and Sergeant Armstrong of all who have been under me, because of the long time these two members of my party worked for the Society, and because at one time during my absence, and before my arrival in Palestine, they had, to a great extent, to settle for themselves what was best to do and how to do it, and did the work without any military assistance from a superior officer in a manner with which there was absolutely no fault to find. (Applause.) There is one word more in regard to the Society. The Society at the end of twenty-one years is a united Society. We include men of very different habits of thought, and our views have not always been the same; but, at the same time, we all stand here to-day together and all equally anxious for the success of the Society, for the pushing on of the good work, and no difference of opinion has been allowed to interfere with the scientific work of this Society. Well, if you know what sometimes is unfortunately the fate of archaeological science—the quarrels and jealousies that may arise—it is one of the greatest triumphs of the Society that we are all united at the present day. (Applause.) Our success has been due, as I have just said, to what we have not discovered. What I mean is, that we have never tried to humbug the British public; we have not brought home any Shapira manuscripts. We could have given you Solomon's seal and the coffin of Samson, but we have refrained from doing so (laughter), and it is to that we owe the confidence that is given to the Society in the present day. We have striven to do good and permanent work, and I think that any who come after us, though they may pick holes in it, though they may find that there are omissions and mistakes, and that there is something to add and something which is not of permanent value, they will not find that there is dishonesty in the work of the Society. (Applause.) All human work must be more or less imperfect—the best books by the most practised writers contain mistakes. The work of this Society, as far as I have been connected with it, has been work of which the object and aim was to ascertain the truth, and the work that has been done has been work which will stand the investigation of all who follow it, as being painstaking and

thoroughly conscientious. (Applause.) The third reason of success has been the work we have done. We have done good work and plenty of it. It is work in accordance with the spirit of the age, and that is no doubt why the Society is a prosperous Society. The spirit of the age is one of inquiry into truth. We have endeavoured and still endeavour to supersede controversy by hard facts; and, after all, the work of the Society is part of yet greater work which has been going on during the past quarter of a century. Sir Charles Wilson called attention to the work going on in different countries. A very large amount of archaeological and antiquarian knowledge proper has come into existence. The work of the Biblical Archaeological Society has become indispensable to the preparation of all those connected with the Palestine Society. It is extraordinary to see how our Society, as it goes on, instead of coming to the end of its work, finds more work to do. We began with geography and topography; but this is a small portion of what lies before us. It has been said that all the best discoveries seem to be made by accident. The Moabite Stone was found by a missionary, who sketched it, but had not time to copy the text; the finding of the Siloam inscription was the result of a boy falling on his face in the water with a candle in his hand. But though these discoveries were in a sense accidental, it must not be forgotten that but for the education of the public in Palestine by the work of the Society these great finds might have attracted no attention, and might thus have been lost to the world. I should like to say one word more with regard to the Bible. There is no doubt that the Bible is at the bottom of the Society. If it was not for that, I do not think that the interest that is felt in the work of the Society would have any existence. If we were working in South America, or Canada, or in any country but that which is connected with the history of the Old and New Testament, the public would not take the same interest that they do in the Holy Land. (Applause.) There is of course a great difference between reading the Bible in English and reading it in Hebrew, but still a greater difference lies in having read the Bible after being in the country where the Bible was written. It seems to become a book of a different character, and it has often struck me that there is a coldness and a want of sympathy in the reality of the Bible as read by students who work in their closets and have not lived in the country where the Bible was written. (Applause.) I feel that the Bible is yet very often greatly misunderstood. There is a great deal to be learnt about it before we can be said to understand it, and in order to be in thorough sympathy with it, it is necessary that you should live in the East and live daily amongst the people for whom and by whom it was written. (Hear, hear.) That leads me to consider the work of the Society in the future. Our first object, I think, should be excavation in Jerusalem, with the object of discovering the second wall of the city. The second wall is a very old friend—or a very old enemy of ours, and it seemed for a very long time as if it was impossible to be found. So it was, too, with regard to the first wall, which was lying beneath the surface at a distance of some 5 or 10 feet, and only Sir Charles

Warren was persuaded that it was there. In the same way the second wall is there. It has been discovered in a position which agrees with the views of most writers who have written for the Fund. But it is only the south end of the wall that has been found ; and although I think enough is now known to lead to the conclusion that the traditional site of the Holy Sepulchre must be abandoned, and that we are free to accept the site without the walls which the Jewish tradition has indicated as the site of Calvary ; still, I think we should direct the works in such a way that, with comparatively small expense, the discovery could be followed up and definite and most important results obtained in confirmation of our views. (Applause.) But with regard to the understanding of the Bible, I think what we want to know now is, more about the inhabitants of the country. We have studied the subject for a long time—first, in a very fragmentary manner ; but latterly we have found the method by which it should be studied, and we have now time on our hands and an opportunity which, I think, is exactly fitted for that style of work. I want to know everything about every race in the country. I want to know about their religious observances, their forms of speech, and the peculiarities of their dialects. I think we shall be able to prove that the peasant language of Syria is the language that the Jews used in the time of our Lord, and it is within the bounds of possibility that that will lead us to a better understanding of the language of the New Testament. I think we ought to be able to draw up a complete account which, at all events, would compare favourably with the wonderful account of Egyptian manners which Lane has left us. I am afraid I have spoken longer than I ought. (Applause.) There is only one thing I would like to ask you in conclusion. The third object we propose to spend money upon, is the publication of what we have got. I have left in the hands of the Society a piece of work which I believe to be by far the best piece of work which I have done for them. It is the survey of 500 square miles east of the Jordan, and contains diagrams, plans, pictures, and descriptions of a more interesting character, and, I think, more complete, and likely to be of more general value than anything contained in these volumes on the table before you. If any one will assist in the publication of that work, they will assist in the piece of work upon which I have most set my heart. (Applause.)

CANON TRISTRAM, D.D., was next called upon to address the meeting, and said : My Lord Archbishop,—When three or four and twenty years ago I was working as a somewhat clumsy journeyman under Sir George Grove on Smith's Dictionary of the Bible, he, whom I may call the sole and exclusive founder of the Palestine Exploration Fund, had only before him 262 names of places identified in Western Palestine, out of 622. As showing the contrast between what we knew then and what we know now, I may say that in Western Palestine alone there are now 434 identified names (applause), and there is hardly any ancient site west of the Jordan of importance, which cannot be now identified with more or less certainty. It

may be said, Why could not this have been done by the volunteers who had written so much on Palestine? But we who went out before and worked were unorganized—a few scouts, a few light-armed marauders making reconnoissances with a feeling that we were in an enemy's country, and one rider after another brought back reports as varying and contradictory as those which Sir Charles Wilson used to receive from the Arabs in the Soudan. No volunteers, however zealous, without the training of English Engineer officers, could possibly have accomplished the work which the Fund has done. It can only be done by men well trained to it, and backed up by such officers as they had. (Applause.) One thing that attracted my attention was the absolute ignorance of the flora and fauna of Galilee. Every one said, "Oh, you may take it for granted that it will be the same as in the other neighbouring countries!" I sent to all the principal museums in Europe, but there was not a single specimen of the fishes of the Jordan or Lake of Galilee to be found in Europe or America. Now the Palestine Exploration Fund has published a catalogue which could not have been published by any private individual. It would have been too extensive a work for any one to have undertaken. In that we have of mammalia 113 species, of birds 348 species, of reptiles 91 species found in the country. We have a catalogue of 3,040 indigenous plants in the Holy Land, and, most remarkable of all, in the river system of the Sea of Galilee and the Jordan 43 peculiar species of fishes where only one was known before—all belonging to genera peculiar to the central lakes of Africa, and which have no connection with the fresh water fishes of Europe or Asia. Dr. Lortet has published a sumptuous volume on the fishes of the Sea of Galilee and the Jordan, and Monsieur Lacard has published another volume on the fresh water molluscs of the same region. It may be said, What bearing have these little matters upon the subject of Biblical illustration? Well, sometimes a very little thing will throw light. For instance, take those two catalogues of the clean and unclean animals in the books of Leviticus and Deuteronomy. There are eleven in Deuteronomy which do not occur in Leviticus, and those are nearly all animals and birds which are not found in Egypt or the Holy Land, but which were numerous in the Arabian desert. They are not named in Leviticus a few weeks after the departure from Egypt; but after the people were thirty-nine years in the desert they are named—a strong proof that the list in Deuteronomy was written at the end of the journey, and the list in Leviticus at the beginning. It fixes the writing of that catalogue to one time and period only: namely, that when the children of Israel were familiar with the fauna and flora of the desert. I hope we shall be able, through your help, to carry on this work, and I appeal, on behalf of Mr. Besant, that you will really give him plenty to do, because I have noticed the more he has to do for the Fund the more story books he brings out for the public. (Applause.)

Mr. JOHN MACGREGOR, who was received with applause, said: Your Grace, I have a short story to tell, but a true one, about something in

the bottle which I hold in my hand. By referring to the picture on the outside of every one of our *Quarterly Statements*, you see the part of Jerusalem which is above ground. You see the great shaft which was wrought down 80 feet deep from the upper ground. That took place when I was there. My good friend Sir Charles Warren and myself were there for a long time, and the one thing that I want to speak of was what we saw down there at that time, and I feel it right to speak of it because he is not here to-day himself. Burrowing down under a place like Jerusalem is very difficult indeed. In the first place, it is a series of ruins, and you have to get down in a most extraordinary cork-screw fashion. And when you have got down about 6 feet, the sides fall in, so you must keep them up with great pieces of wood; but wood is the very thing that is most expensive in Jerusalem. When you have got down about 20 feet all these beams take away the light, and at last, when you get down 40 or 50 feet, it becomes very hot. And then stones came down clap on the back of our heads. We all had very hard heads. (Laughter.) At last we came down about 80 feet, and then we saw what we desired, and that was the foundation of the corner-stone of the city. Remember there is the saying of Christ—"And Jesus went out and departed from the Temple, and His disciples came to Him for to show Him the buildings of the Temple; and Jesus said unto them, See ye not all these things? Verily I say unto you, there shall not be left here one stone upon another that shall not be thrown down." (Matt. xxiv, 1, 2.) But that did not apply to those stones which had never been seen by the disciples, and we knew then that the words of Christ were so accurate—they were stones that had never been turned up. Therefore we came to the place where they have been interred since the days of Titus, and at last we came to the rock. It was a happy day for me when I saw that a second time by myself. I went down and was at the bottom, and there was the rock, and there was the first stone of the corner, and, without intending it, I had a large hook knife in my pocket, and somehow something came into my hand, and that I saw was like a very great tooth. I put it into my pocket and showed it to Sir Charles Warren, but no one could make out what it was until we came back to England, and so we went to the best authority in the world. I said, "I think it is a sheep's tooth or a camel's tooth;" and Professor Owen, in that funny way he has, said, "Where did you get it?" I said, "I won't tell you that. I want to know what it is first?" He said, "Oh, it is an ox's tooth. Where did you get it?" I told him. He said, "In those days, and perhaps, indeed, in the present day, when they were beginning a new and important building an ox was sacrificed, and the blood was put upon the living rock." And here is that piece. It is surely worth while that you should see it. (Applause.) I noticed that the red marks upon the stone left their place. They were strange in shape, and when we had got this shaft open they began to fade, so I went and took a quantity of pink and made pink marks, and then carried them down and compared them with the different ones. Afterwards when I went to Baalbec I found the same red was there, and when

I went down a few days afterwards the whole of the red had escaped. We have had reserved for us many of these things, which, in a little time, might have been entirely thrown away and misused, but which are now under the strong patronage of the public and people at the head of affairs, and of such men as you see round you and who have spoken to you. (Applause.)

Professor HATTEY LEWIS was then called upon to speak. He said: My Lord Archbishop, ladies and gentlemen, Owing to my having paid a recent visit, a second time, to Jerusalem, I have been asked to say a few words as to the finding of the second wall, but I should like, first, to add a few words to what has been said by Canon Tristram as to the catalogue of the mammalia, fauna, and flora of Palestine. One point he entirely forgot to mention—that these discoveries and catalogue were made by himself, and they were published in one of our most interesting volumes. With respect to the second wall, I should wish you distinctly to understand that I do not claim in the slightest degree any merit in the discovery, which was made by Dr. Selah Merrill and Mr. Schick, the German architect. Both of them live in Jerusalem, and from time to time communicate with us upon our work. They are most excellent friends, but no doubt would not have given the close attention to the work which they have done had it not been for their connection with the Palestine Exploration Fund. We may look upon the work we do as we would upon a museum in a country town. Constantly you get curious things turned up, and if there be no ready receptacle for these, the chances are they are taken to some private house and gradually get lost. The result is we lose a great deal which we would not if there were a receptacle for such finds. The records of this Fund provide against such a case as that. Without it the discovery of the wall might have been brought before the public in some way or another, but as likely as not, there being no actual receptacle for such a discovery, this and others would be altogether lost. With respect to this wall it sounds, no doubt, a very slight thing to say that we have found a piece of an old wall; but I need scarcely here mention that the second wall involves to us Biblical scholars a very serious matter indeed, and it is this—whether the Church of the Holy Sepulchre covers the actual tomb of our Lord, or whether the place we have revered as being the actual cave in which our Lord was buried was only a myth. You all know perfectly the account in the Bible that Calvary and the entombment were nigh to the city, but clearly outside the walls. If, therefore, the second wall include the Church of the Holy Sepulchre there is no question that the site is not the true one. If, however, we find that the wall turns, and that the tomb was outside the city, we see that the tradition may be true, and we may still continue to reverence the site as we have done for hundreds of years. Round Jerusalem there are three walls, and there is a fourth round the Temple area. I have made a rough drawing, which will partly explain perhaps what I am about to say. [Professor Lewis here exhibited it.] The tinted part is the modern Jerusalem—the Jerusalem within the present walls. To the east—to your

right—is the Temple area—the noble Sanctuary—that is to say, the place on which undoubtedly the Temple of the Jews (Temple of Solomon, the Temple of Herod) was placed. It is this part, which I have marked here rather darker, on which it is supposed the Temple was placed. In regard of this and the question as to the site of the Holy Sepulchre, I venture, on behalf of the Society, to pay a tribute of respect to the memory of Mr. Fergusson, who was one of our most zealous Biblical scholars. He devoted an immense amount of energy and literary research to the subject, and although many of us, myself amongst the number, disagree with his theories, yet we must all of us bear witness to the great learning, the great skill, and the great earnestness with which Mr. Fergusson pursued his work.

As I have said above, there were three walls to the City. The first wall was built by Solomon and was finished by Herod. The third wall does not concern us; it was after the time of our Lord. The second wall, which concerns us now, stood in the time of our Lord, and, therefore, whatever we find about it relates to the particular period of His life. The first enclosed the south and east part of Jerusalem, and, with respect to that, the difference of opinion as to its course is very great. You see by the plan how different the theories are, and all by men whose opinion you would take as from persons who are truly capable of giving it. Yet you see how great the differences are, and how utterly at sea we were when we began to work at Jerusalem, upon any point which an ordinary student would expect to be known. We have, with respect to the course of the second wall, a description of Josephus which gives some clue to it. He says: "The second wall took its beginning from that gate which they called 'Gennath,' which belonged to the first wall; it only encompassed the northern quarter of the city, and reached as far as the tower Antonia." Further, Josephus says: "The first fortification was lowered, and the second was not joined to it, the builders neglecting to build the wall strong where the new city was not much inhabited." The exact site of the tower of Antonia is disputed, but there is no dispute about its general position. The newly-discovered wall is a little to the west of Gennath, where Colonel Warren and Dr. Williams and Dr. Robinson and Captain Conder all placed it. When you talk of a wall, it is not such a wall as we are accustomed to in England. It is from 8 to 10 feet thick, built of stones 6 or 8 feet long, and it has been found to the length of about 120 feet. It is almost certain that it is a portion of the second wall. It is likewise certain that the outside of the wall was to the west—that is to say, to the outside of the City; for this reason, that its external face was worked in a particular kind of way, a way found very rarely except in Palestine, showing that the outside was to the west. What we want to find out now is which direction beyond the 120 feet it takes. Upon that we are, at present, in doubt. The importance of it is that upon that direction turns the question whether the Church of the Holy Sepulchre was outside the wall or not. Unfortunately, it leaves off just in the place at which, according to one theory,

it would have turned to the north, so that it would enclose the site of the Holy Sepulchre, or to the east, in which case the site would probably be outside the second wall. Dr. Merrill and Mr. Schick, both on the spot, vary in their opinions respecting the direction. One takes the east and the other the north. It would be rather imprudent at present to say what steps the Committee have taken to ascertain that point ; but, I need not say, we are all most painfully alive to the importance of ascertaining the fact ; for upon it, unquestionably depends this—whether we must consign to the region of doubt and myth the report of the tomb of our Lord being within the site of the Holy Sepulchre, or whether we must still believe, as we have done for the last 1,500 years, that the Church of the Holy Sepulchre does enshrine the cave in which, for some brief space after death, our Lord lay. (Applause.)

A vote of thanks was accorded to the Archbishop of York, on the motion of Mr. GLAISHER.

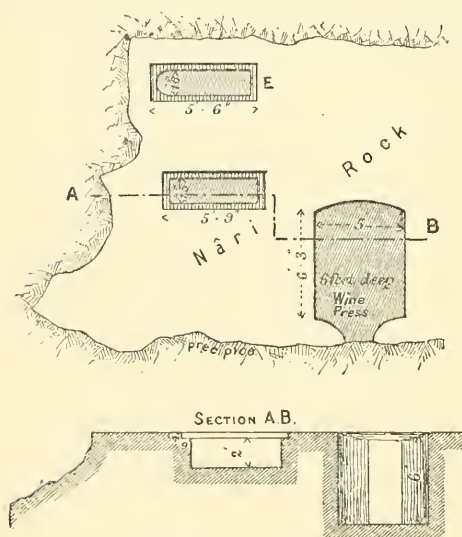
The CHAIRMAN then moved a formal resolution in support of the Fund, which was carried unanimously.

RECENT DISCOVERIES, NOTES AND NEWS FROM THE LIVA OF 'ACCA.

BY G. SCHUMACHER.

OFFICIAL duty led me lately to the village Et Tumrah (Sheet V of Palestine Map; "Memoirs," p. 273), on which occasion I visited some interesting tombs, recently opened by the natives close east to the village. The mountain slope on which they are situate is composed of a compact Nâri (lime) stone, and shows here and there regular cuts into the rocks, the remains of quarries, any number of deep circular cisterns, now opened and prepared by the natives for grain stores and rainwater. While cultivating the soil and preparing the slopes for planting figs, pomegranates, and vines, they also opened some singular sarcophagi cut into

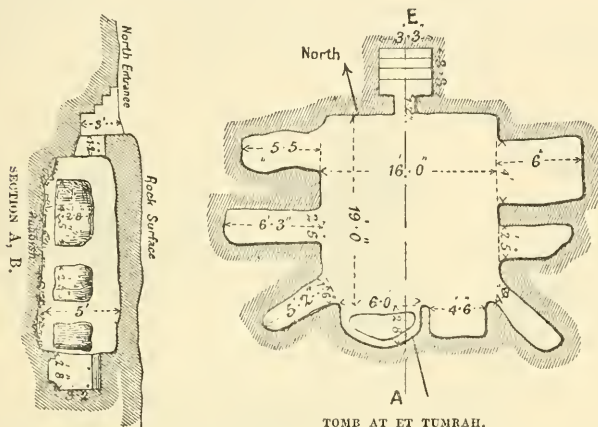
the rocks, lying apart without any distinct order; these graves have either a rectangular shape, or they are rounded in their western part (most of them are oriented from east to west, or from south-east to north-west) and show a rabbet round the opening for the covering slab. The general depth of the graves was 2 feet, their width 18 inches; the length varies, naturally, very much. Next to the graves, winepresses of different size were opened.



TOMBS AT ET TUMRAH.

A second class of tombs was found in wide subterranean rooms, in natural caves, similar to those found at Sheikh Abreik, Jebâta, Yâfa. We first enter the cave by a narrow stairway, in the north; a few steps downwards lead to a rectangular room, filled up with rubbish, 19 feet from north to south, 16 feet from east to west, and 5 feet high. Both walls and flat roof consist of a crumbling white limestone. In the western wall we find three kokim, in the southern wall one koka in the south-east corner, and two indistinct loculi—one of which was probably under an arcosolium; the eastern wall

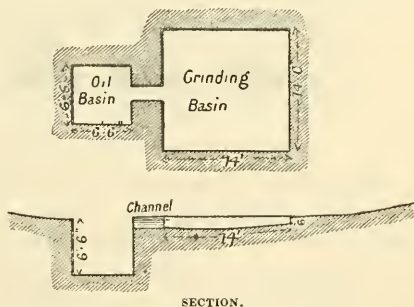
contains one loculus and one wider room about 4 feet wide and 6 feet deep. These burial places, owing to the very soft rock into which they are cut, are in a most crumbling state. The absence of any conduit proves that the cave had but one central room. There is no sign of plastering to be discovered, and the interior is very damp, but in the middle koka of the western wall I found parts of a human skull and



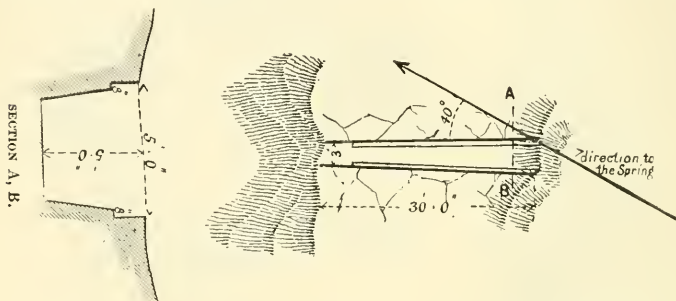
TOMB AT ET TUMRAH.

other decaying bones. Near this tomb a Mohammedan saint, Mustafa Abu 'Edel, *عصطفى ابو عدل*, is buried amidst vineyards and shaded by a Butm (terebinth) tree of luxurious growth; there is no sign of a grave, but short rows of large, unhewn stones surrounded by a large circular row of great stone slabs of undoubtedly great age are found between the chaos of roots. The Sheikhs assured us that a "Sanam" (an idol) representing a bull's head cut out of the neighbouring Nâri stone, was found below this Butm tree some ten years ago, but reburied again by the people.

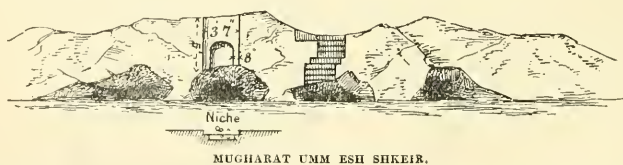
Oil-presses discovered near the tombs above described are abundant; they contain each a small square basin, 6 feet 6 inches each way, the actual oil basin, to which a second larger basin 14 feet square is added, in which the oil fruit was ground. Both are combined by a channel. Round grinding stones made of a hard limestone, 3 feet in diameter, are scattered about. In an olive grove, in a depression of the earth, at the head of Wâdy el Ain, north of the village, a spring appeared in winter and



continued also during the last summer months ; it is said that 'Ali Pasha, Governor of Acca, once dug a deep well at this spot in order to supply the village, whose nearest well is the Bir et Tireh, two miles off, with water, but in this he failed. I followed the course of the water up towards the wâdy and hit a channel, cut into the rocks, 30 feet in length, 5 feet wide, and 5 feet 5 inches deep. Its western end opened into the wâdy, while its eastern could for the moment only be followed up to the length given. I consider this cut to be an ancient aqueduct, and hope to continue my observations shortly.



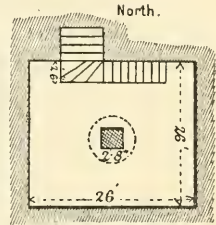
Very near east of the town the remains of a great cave can be observed ; it is now used by the fellahin women to dig for Hawwâra, or white-clay, for the purpose of manufacturing all sorts of household materials, for white-washing the interior of their smoky rooms, and for repairing the roofs before the rainy season comes ; the interior disposition, therefore, is entirely changed, but on the outside we recognise its original character : a round niche cut out of the worked rock, a low entrance just below it, and stairs leading down the cliff to it. We find similar ornaments on the Carmel caves and elsewhere, formerly used as burial places. The present name of this cave is Mughârat Umm Esh Shkeir, مغارة أم الشكير, "The cave of the sprout (shoot)."



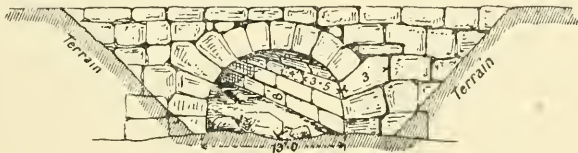
Walking from it southwards we cross vineyard-fences, traces of ancient walls built up with large unbewn stones ; it is the ancient site of the present town, and is called Tamarlenk, طمرلنک, by the natives. Near the threshing-floor remains of mosaic work were found, and beneath the Sheikh's dwelling, close by, large columns and extensive caves are said to have been discovered. We cross the wâdy running south of the village,

and find on the opposite side rock-cut cisterns and winepresses. One of these cisterns was opened, cleansed and replastered, and has a rectangular shape, measuring 26 feet each way, 17 feet deep, with a square opening on the surface of 2 feet 8 inches, covered by a large round stone slab. A stairway leads down to the bottom of the cistern. The walls are perpendicular, and show no sided recess or opening. The village itself is in a flourishing state, its cultivated fields extend westward to Tell el Kurdâneh, in the 'Akka Plain, and are of excellent quality; the inhabitants are industrious, gentle, and intelligent, and now begin to cultivate even the bare slopes of the adjacent mountains with vines and fig-trees.

From Et Tumrah I took a north-western course to El Bassa, and from thence to the Râs en Nakûrah, the "Scala Tyriorum," or Tyrian ladder ("Memoirs," I, p. 191, Sheet III). The paved road across this cape is getting worse and worse, and the Government are now seriously considering its reconstruction. We descended from the old watchtower down to the Jisr



CISTERN AT ET TUMRAH.

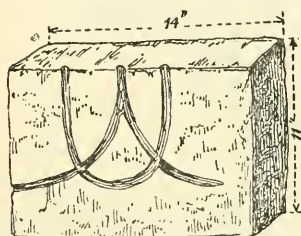


JISR EL MEDFÛN.

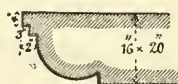
el Medfûn (Sheet III, *d*), a small stone bridge across the Wâdy el Medfûn; its single round arch, 13 feet wide, is partly of very ancient character; half of its breadth, being 19 feet in all, was renewed under the Pasha-Government of 'Akka, in the beginning of this century; the masonry sand-stone very large, some 3 feet 5 inches long, 3 feet wide, and 1 foot 4 inches thick, fitted together with mortar. The Wâdy el Medfûn, as well as its Jisr, was up to the latest date ill-renowned for the murders and robberies constantly occurring at this place; its situation in a narrow gorge, grown with brushwood and entirely hidden (as medfûn = covered, hidden would already state), seems very suitable for the trade of highwaymen; the watchtower on the Nakûrah Cape was especially built to protect the passage. Wâdy el Medfûn is at the same time the natural *boundary* between the Mutasarrifiyeh of 'Akka and that of Beirut, or in a closer sense between the Kada of 'Akka and that of Sûr (Tyre). Riding from here towards Sûr, the road passes after a distance of about 500 yards a precipice projecting steeply into the sea; on the outmost point of this cape I discovered heaps of hewn and unhewn stones, set in rows or lying in disorder apart—my guide called them Kubûr el Kerâd, قبور الكرد, the "Graves of the Kurds," a signification which afterwards proved to be generally known, but nobody could give any explanation for it. At the

Burj el Ghafr, on the northern slopes of the Nakûrah mountain, a Khân, the Khân en Nakûrah, is built, where the tourist may find a cup of good coffee, a Narkile (water-pipe), and bread and laban (sour milk); as an exception also some eggs and butter; the water of a fine spring, the 'Ain el Ghufr, running out below the Khân, may be preferred by most of the tourists to the dainties mentioned. After crossing the Wâdy Hamul, called Wâdy ez Zerka in the map (Sheet III), we recognise to our right the ruins of Umm el 'Amad, أم العمد, called Umm el 'Amûd, أم العمود, in the map; both significations seem to exist for the place, and little further on the caves "Mughr et Tâkât," of Sheet III, mentioned to me as Shakif ed Dakâk, شقيف الدقاق, (the unapproachable pots?).

Arriving finally at Iskanderûna, I found that the new proprietor developed a great fondness of constructing grinding mills; he built up the fine 'Ain Iskanderûna, and led it by an aqueduct to the mill. The horses can now be very easily watered, a good drink of cool, sweet water can be had, and even a fine swim can be managed, but owing to mistakes



Nari Stone

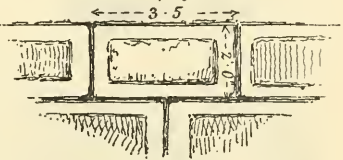


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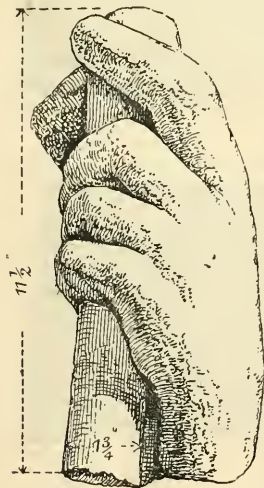
made in construction the mill does not work. A clean Khân building is erected close to the aqueduct, where even a room for a night's shelter can be found. The building stones for the mills mentioned were excavated on the old site, but very few ornaments were found; the annexed curious fragment and several bracket-stones were all I could discover.

Riding from here to Sûr we meet with a newly constructed road to be continued on to 'Akka and to Saida, the result of the understanding between the Government of the Lebanon and that of Syria to build a carriage road from Beirut to 'Akka. At the same time good roads (chaussées), 25 feet wide, with ditches along both sides, are commenced at 'Akka towards the Râs en Nakûrah, from 'Akka towards Safed and Tiberias, from Haifa to Nazareth and Jenîn, from Nazareth to Jenîn, from Nazareth to 'Akka and Tiberias, from Tiberias to 'Akka, from Safed to 'Akka, and to the Jisr Benât Y'akûb. Of these projects a total length of seventeen miles is already executed, and new working materials have arrived to complete the work. The road-works are subordinate to the Engineer of the Liva or Mutasarrifiyeh and five "Conducteurs," sent especially from Constantinople to this effect. The Turkish Government has considered the matter of reconstructing roads very seriously, and has given strict orders to recognise these reforms as being of the greatest importance. The roads are built in socage—i.e., every inhabitant of the Liva, be he a R'aya or a foreigner, from the age of sixteen to sixty, is obliged to furnish annually a four days' labour or to perform his duty by an annual

payment of 24 piasters = $4\frac{3}{4}$ francs ; to this effect a *Daftar en Nefûs*, or "Register of Souls," is furnished by the Kaimakam of each district, according to which the Engineer arranges his work. A similar progress is to be remarked in the Liva of the Belka (Nâblus), Beirut and elsewhere. The urgent necessity of placing the important routes of Palestine into a better condition was long ago felt by every tourist travelling through Palestine, and more so by those who had to deal with the interior, and this progress is therefore met with universal thankfulness, even by the fellahîn population into whose hands the traffic was generally laid. While working at these roads and making a cutting through a mound, about 800 yards north of the Gate of 'Akka, an old canal or aqueduct was struck, of rectangular shape, 3 feet high, 2 feet wide, built up with uncommonly stout masonry of sandstones, and well plastered with several layers of reddish mortar; according to tradition this canal formerly supplied the city of 'Akka with water from El Kâbry (8 miles from 'Akka) before the present aqueduct was built. Different small conduits of pottery pipes joined the above with the object to water the gardens surrounding the village to the east and north at the time before the Government of Jezzâr Pasha, who cut them down in order to render the city the character of a citadel. Excavations made near the southern foot of Tell el Fokhkhâr seem to prove that the original city extended to this mound. I found foundations of walls built up with mighty recess stones, in a depth of 22 feet below the surface, and cisterns of rectangular shape having a

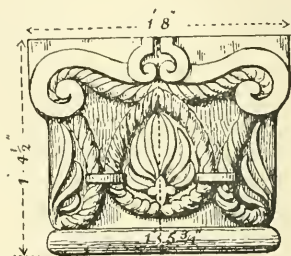
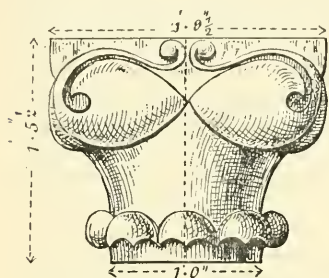


splendid impermeable cover of reddish mortar, but a real plan of the above could only be obtained by making extensive excavations. From near the above Tell el Fokhkhâr, potters brought me a hand, cut of white marble, of the size and shape hereby given ; the excellent carving was done, although evidently unfinished, by a classical Greek or Roman sculptor, and to judge from its size belonged to a statue of nearly the double size of a man ; the cane held in the hand, as well as the statue, might have reclined against a wall (see photograph of the back part).

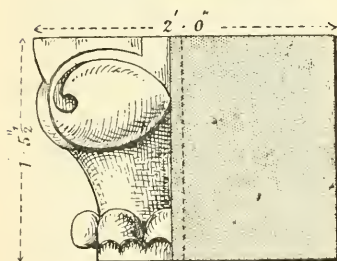


Seffûrich.—The old crusading castle at Seffûrich has been restored. The intelligent Kaimakâm of Nazareth, considering that before building roads a still more urgent want to the Mohammedan population was the opening of good schools "to teach the children in the religion of their fathers," and to give them a thorough education, has erected schools in the villages of

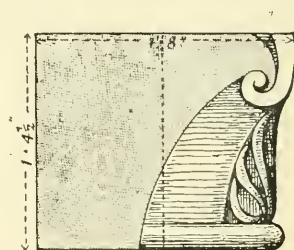
his district. At Nazareth, Meshhed, er Reineh, and Mejeidil he erected school buildings; in the place first mentioned a fine school next to the Jâma', containing two wide schoolrooms and four rooms for the teachers, has already been executed and opened; at Seffûrieh he built a second storey on the fine crusading castle (see "Memoirs," Vol. I, p. 335), containing two large schoolrooms and a corridor, and has cleansed and paved the vaults of the parterre storey to receive the teacher and his family. The style of architecture hereby chosen has been somehow in correspondence with the ancient remains of the lower part, which have not been injured



FRONT VIEW.

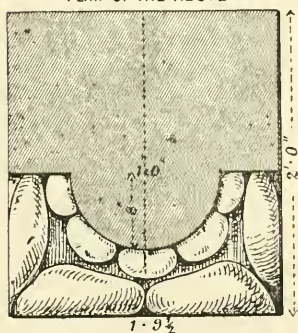


SIDE VIEW.

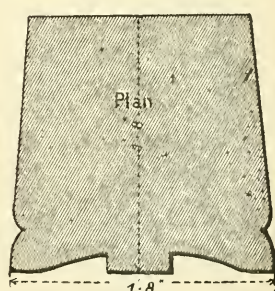


SIDE VIEW

PLAN OF THE ABOVE



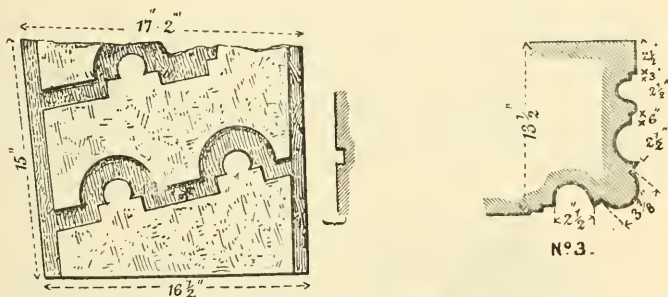
N°1.



N°2

in any way, the airy and beautiful position of that Kala'a renders it one of the finest places in the district, seen from the sea-coast, and itself commanding a magnificent view. Thus the old crusading castle serves to a peaceful object, and its memory may last longer than that of others, rapidly abandoned to decay.

Mount Tabor.—The Greek orthodox church, occupying the northern plateau on Mount Tabor, Jebel et Tôr, have made excavations close to the east of the present convent buildings, and opened traces of buildings, thick walls and large stones, fragments of columns and capitals. The building could not be planned for the present; for this purpose more excavation work is still necessary; but the Superior has promised not to destroy the tracings. The ornaments found were for their curiosity worth sketching (see figs. 1 and 2). The stone out of which they are carved is a rough limestone (Trümmerkalk), not fit for sculpture work at all. A better kind of white soft limestone is represented by the following ornament, also found near :—



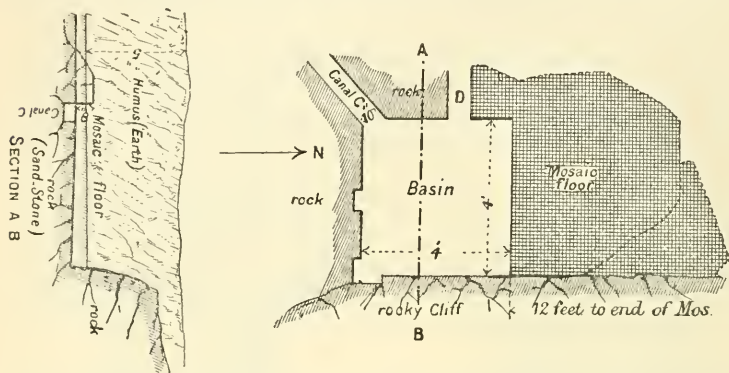
To judge from its shape, and of that of other fragments, as No. 3, scattered about, they formed an arch, and have an early Gothic or late Romanesque character.

Haifa.—During the seventeen years since the German colony at Haifa was founded, and although extensive excavations have been made on its lands a mile west of the city of Haifa, no antiquity, with the exception of winepresses on Mount Carmel, were found; this appeared all the more strange as the ruins of ancient Haifa, Haifa el 'Atika, lie within half-a-mile's distance westwards from the colony.

Last week a Colonist occupied workmen on his parcel near the sea, and in a depth of 5 feet below the ground they suddenly struck a fine pavement of Mosaic, which had a slight slope towards west; further excavations showed that a basin cut out of the rock, 4 feet square and but 8 inches deep, was adjacent to the south, and from it a conduit, D, in the same sand-rock led westwards, while a second rock-cut canal, C, 10 inches wide and deep, could be followed up towards south-west for several yards.

The Mosaic floor was composed of pieces of hard Carmel limestone,

1 inch square, of white colour, and was laid in good mortar mixed with ashes and little sand. The basin and canals were cemented with a reddish layer, that is mortar mixed with pottery fragments (Humra), of best



quality. The whole was covered with alluvial earth, Humus, of the height of 5 feet. I suggest these remains to be those of a small Roman bath; the basin being used to filter the water, C being the afflux, D the reflux canal, and the Mosaic floor the bath itself. The amount of building stones found were very little, but they may have been taken away, as a quarry

existed at the spot before the foundation of the colony. In prolonging the direction of canal C upwards towards Carmel for about 600 yards it would strike a spring, flowing abundantly for several months, and which pierces through the plain down to the sea coast also during the summer. These discoveries would lead to the opinion that a good part of the remains of old Haifa may be covered by the alluvial earth of the plain west of the city.



Liva of Nablus.—Friendly natives called lately and offered a statue found at the head of a sarcophagus within the ruins of *Sebastiyeh* ("Memoirs," Vol. II, p. 211), or Samaria. On the request of the German Vice-Consul, Mr. Keller of Haifa, it was brought here on camel's back, and I am therefore able to give the annexed reproduction of it. The semi-statue, 2 feet 1 inch high,

represents a female, and is of natural size, carved of a soft Nâreh (lime) stone; the face is worked with undoubted art, the lower lip is *painted* with a carmine red colour which cannot be washed off, while the neck is too tall and stiff. A sort of veil overhangs the hind part of the head, and is folded round the breast, leaving a portion of underclothing visible beneath. The drapery shows but little art, and differs in that, as the Oriental statues in general do, so much from the rich draperies of the classical ages; nevertheless, an influence of Greek or Roman sculptors in the character of the face must be admitted. The hair-dressing is very primitive. The stand of the statue is rectangular, and would prove that it was built above or against a wall.

The statue could be obtained for £10.

The man who brought the above statue further stated that he knew of more similar, and statues representing a "whole human body," also "tombs," one of which is in a vault below his residence near Sebastîyeh. He further stated that a "Jammûs," a buffalo-ox, was found at the same old site, carved of stone, of full size, but that the Government had put a guard over it, in order that it may not be carried off or sketched! "Allah ma' es Sâbirîn" (God is with the patients), "lâkin el 'Ajaly min esh Shîtân" (but haste is from the evil)!

Askalon.—Through the kindness of Mr. Bauernfeind, now at Jaffa, I now enclose a photograph of some Kufic inscriptions, obtained from the natives on his recent visit to Askalon.



The natives pretended that the inscriptions were found at 'Askalân, but certainly neither Mr. Bauernfeind nor myself could carry the responsibility as to the truth of their statements.

G. SCHUMACHER.

HAIFA, 30th August, 1886.

HIPPOS OF THE DECAPOLIS.

MORE than eleven years ago¹ I had the honour of reading before the Académie des Inscriptions et Belles Lettres, a memoir entitled, "*Where was Hippos of the Decapolis?*" In this memoir I endeavoured to establish, chiefly with the help of Arabic documents, too often neglected by Biblical scholars, that the site of this ancient city, belonging to a district close to the Sea of Tiberias, mentioned several times in the Gospels, must not be identified with any of the various localities suggested until then by the most authorised topographers of the Holy Land.

Relying on the fact that the Semitic name of the city of Hippos was *Sousitha* (which has the same signification, *sous*,² and *hippos* meaning "*horse*"), I attempted to show—

That this name of *Sousitha* should correspond to an Arabic word, *Sousya*;

That this name *Sousya* had been faithfully preserved by the ancient Arabic geographers.³

That it was still applied by them, during the mediæval ages,⁴ to a locality situated not far from the Sea of Tiberias, and corresponding exactly with the ancient sacred and profane data concerning the situation of Hippos.

I added, taking into account the remarkable persistence of the Arabic tradition in the matter of toponymy, that the name of *Sousya*, although not appearing upon any of the maps published until then, could not have disappeared; that a conscientious exploration of this country, which I had

¹ Sitting of the 4th June, 1875. The memoir was published the same year in the *Revue Archéologique*.

² The feminine form *Sousitha* would appear to indicate, either the Greek name of the city as being ἡ ἵππος, *the mare*, and not ὁ ἵππος, *the horse*; or that *Sousitha* corresponds, properly speaking, less to the name of the city itself than to that of the surrounding country, Ἰππηνή (*ἰππηνή* being strictly the ethnical feminine of ἵππος ἵππος, ἰππηνός, ἰππηνή = *Sous, Sousi, Sousitha*).

³ Especially by Ibn Khordadbeh, whose valuable text we owe to the masterly edition of M. Barbier de Meynard.

⁴ I take this opportunity of pointing out that the name of *Sousya* seems to me to have been known to the Crusaders, and preserved under the form of *Sesye*, "*Casal*," situated near the Jordan, and given by Tancred to the Hospital in 1101 (Palli, *Codice Diplomatico*, I, No. 156; Rey, *Les Colonies Franques*, p. 446).

not been able to visit myself, could not but result in the discovery, at the place I suggested, of a "Khurbet" *Sousya*; finally that this was the spot where the site of Hippos should be fixed. It would be easy, I wrote, for the first traveller surveying the neighbourhood of the Sea of Tiberias to make the necessary verification on the spot.

I have the satisfaction to state that this verification has just been made, and that it fully confirms my anticipations. A German traveller, Herr Schumacher, who has quite recently surveyed the Jaulân—the territory of the ancient province of Gaulônitis—has found, between Fik and Kal'at el-Hosn, the *Sousya* or *Sousiya* whose existence I announced in 1875.¹ He does not hesitate to recognise in the extensive ruins bearing this characteristic name, the city of Hippos, whose autonomous coins he had collected in the adjacent localities.

Herr Schumacher makes no mention of my memoir, where long ago was formally exposed the theoretical solution of the problem which has just received its application on the spot. This omission can, to a certain extent, be understood; this traveller appearing only to have known, in the way of modern works on this country, Mr. Selah Merrill's book, "The East of Jordan," and this book, although several years later than my memoir, does not, as far as I am aware of, appear to have taken account of its conclusions.

It is more surprising that these conclusions are not remembered by MM. Guthe and Socin, who are generally so conversant with everything concerning Palestine, and who have published, enriching it with numerous and learned notes, the interesting account of Herr Schumacher.²

I, for my part, understand it so much the less, because M. Socin was certainly acquainted with my memoir, after the reading of which he was kind enough to send me, more than seven years since,³ some accessory remarks.

If I have judged it necessary to bring these facts before the public, it is less, I hasten to say, to raise a question of priority, than to make known the final proof of a theory which had been accepted on trust by several persons. Above the secondary interest a savant may have in claiming any discovery there is the superior interest of science, which ought not to neglect registering the evidence of the exactitude of its method. It is for

¹ Zeitschrift des Deutschen Palästina, Vereins, IX, pp. 187, 324, 334, 349. Leipsig, 1886.

² These notes are sometimes open to criticism; for instance, p. 170, the pronunciation *rujâl* (men) is really used in the modern Arabie, whatever M. Socin may assert; p. 172, the same remark applies to *tôm* and *tômè* (garlic); p. 173, a *rág* does not only mean *caves*, but also *cliffs*; p. 185, the dissyllabic pronunciation *rûjûm* (heap) is also in use; p. 192, the true pronunciation is *Serris* and not *Seris*, and the word is applied to a shrub whose botanical species I am unable to define, but, in any case, it is not a "Cieharienpflanze" (the name of the place *Serris*, in the neighbourhood of Jerusalem, is of the same origin) ! &c.

³ Letter of the 2nd February, 1879.

this last reason that I permit myself to insist upon the importance and the bearing of the statement made by Herr Schumacher. This statement is not merely the material justification of my identification of Hippos with Sousya ; it is, before all, the convincing proof of the method itself of inference, that I have many times had occasion to apply, or to advise the application of, to Biblical topography. I may perhaps be allowed to call to mind that it is owing to this method taking its main point from the Arabic tradition, written and oral, a very strict method in its apparent boldness, that I have, for instance, been enabled to determine, *à priori*, the site, hitherto vainly sought, of the royal Canaanite city of Gezer, and that with absolute certainty, thanks to the explicit inscriptions engraved on the rock I had the good fortune to discover several years after my theoretical determination.

Although Herr Schumacher does not bring us for Hippos this epigraphic guarantee, infinitely rare in Palestine, one may nevertheless, at the present time, as I proposed in 1875, confidently inscribe upon the maps, at the ruins of Sousya, the site of the ancient Hippos, and assimilate with the surrounding neighbourhood the district of *Hippene*, to which this important city had given its name.

CLERMONT-GANNEAU.

NOTES ON ARABIA PETRÆA AND THE COUNTRY LYING BETWEEN EGYPT AND PALESTINE.

BY COLONEL SIR CHARLES WARREN, G.C.B., R.E., K.C.M.G., F.R.S.

1. BETWEEN the cultivated lands of the Egyptian Delta and the hill country of Palestine extends an arid wilderness, part of which is known as Arabia Petræa ; it is also known under the name of the Desert of the Exodus.

2. It is bounded on the north by the Mediterranean Sea, on the south-west by the Gulf of Suez, and on the south-east by the Gulf Akaba and Wâdy Arabah. It is thinly inhabited by nomadic tribes of Arabs, who, according to their traditions, have come from the south, from Mecca, and who are slowly migrating onward into Africa.

3. The country may roughly be divided for general description into four portions :

- a. The semi-fertile portions about the southern end of Palestine, which have once been cultivated but are now lying waste.
- b. The arid table lands of the Tih.
- c. The sandy dunes about the coast of the Mediterranean and Suez Canal.
- d. The mountainous district of the Peninsula of Sinai.

a. This is commonly called the "South Country," and of it Professor

Palmer remarks (p. 297, "The Desert of the Exodus"), "Half the Desert owes its existence to him (the Bedouin); and many a fertile plain, from which he has driven its useful and industrious inhabitants, becomes, in his hands, like the South Country, a parched and barren wilderness." This South Country, or Negeb, is wholly in Turkish territory; it is the home of the Lehwat, the Amarin, the Azazimeh, the Jehalin, and part of the Teyahah. It was once a well-cultivated land, and the ruins of the vineyards and terraces on the slope of the hills are still visible. This country is an artificial desert; it was not visited, and will not be further referred to.

b. The desert of the Tih is a limestone plateau, and is described in general terms in the "Desert of the Exodus."

c. The sandy dunes about the sea coast and Suez do not appear to be anywhere described. It is for the most part an undulating waste, covered with blown sand from the sea-shore or from the disintegration of sandstone rocks. Its sands are constantly but slowly in motion. In some portions the natural features of the country are very thickly covered with these sands, and only crop out at intervals.

d. The Peninsula of Sinai is described in a variety of works.

4. It is not proposed in the following remarks to make a compilation from other works, but simply to state what may be new or may have been previously incorrectly stated. The very best works contain most erroneous accounts of the Bedouin, and even Professor Palmer was mistaken about the localities they inhabit. It appears never to have been recognised that the tribal grounds are interlaced, and that in many parts detachments of several tribes are found amicably living near the same waters.

5. The desert territorially may be divided into three portions:

A. Turkish Territory.

B. Egyptian Territory east of the Suez Canal.

C. Egyptian Territory west of the Suez Canal.

6. The portion visited lies almost wholly between the Suez Canal and the Eastern Egyptian boundary. This boundary does not appear to have been clearly defined by treaty or otherwise. Several charts show it as a straight line drawn from Al Arish (on the Mediterranean) to Akaba; but, on the one hand, the Porte appears to assume a nominal control over some tribes of Bedouins to the west of this line (in Jebel Hilâl for example); while, on the other hand, the Egyptian territory on the coast of the Mediterranean extends up to Rephia, midway between Al Arish and Gaza. It seems probable that the boundary inland has never yet been demarked, and this uncertainty may at some future period be a source of difficulty leading to a conflict of jurisdiction.

7. The tribes are located according to the lettering:

Terebîn, A.B.C.	Ayeideh, B.C.
Haiwatat, A.B.C.	Towarah, B.
Teyahah, A.B.	Sowârkeh, A.B.
Azazimeh, A.	M'said, B.C.
Alawîn, A.	Turmeilat, C.
Lehwat, A.B.	Mââseh, C.
Bili ben Ali, B.C.	

8. The *Terebîn* comprise a very powerful series of tribes, principally living about Gaza, where they are said to number 2,000 fighting men.

Other detached minor tribes live near the Suez Canal, and a powerful tribe lives in the Gizeh district, near Cairo; these tribes are closely connected, but the Egyptian Terebîn have, in many instances, almost become fellahîn. Those who live in Syria are extremely turbulent and fanatical, and are always hostile to Franks. They are said to be very untrustworthy and deceitful. They have a large number of horses and camels, grow corn, and are very wealthy. The Turkish troops quarter themselves among them during harvest time for the purpose of collecting taxes, but are frequently driven out. The Turks generally keep some of their sheikhs in prison as hostages.

The *Haiwatats* comprise also a very powerful series of tribes. They inhabit a large tract of country east of the Gulf of Akaba, and also Wâdy Arabah, under the name of Alawîn. They also occupy the country between Suez and Akaba, but only in detachments. They occupy the country between Suez and Cairo in great force, and also about Zagazig. During the late war they were ordered to furnish a contingent of 2,000 men to save Cairo from an attack from the direction of Suez.

Sheikh ibn Shedid belongs to a very wealthy family living close to Cairo, who from their wealth and influence, having obtained the ear of the Egyptian Government, assume a kind of control over all the other Egyptian Bedouins.

The *Azazimeh* live wholly in Turkish territory, to the west of Wâdy Arabah. They are a turbulent tribe, constantly at war with their neighbours. They have been seldom visited by travellers.

The *Alawîn* are a branch of the Haiwatat, and live in Wâdy Arabah.

The *Lehewat* live near the Azazimeh; they do not appear to be a formidable tribe. Meter Sofieh, the guide to Professor Palmer's party, belonged to this tribe, but had ceased to live among them.

The *Bili ben Ali* live almost wholly west of the Suez Canal, but there are a few families about Al Arish.

The *Ayeideh* live almost wholly west of the Suez Canal, where they have been driven during the last few years by the Terebîn, with whom they have still a blood feud; their lands formerly extended between Jebel Moghara and Ismailia.

The *Towarah* inhabit the desert of Sinai, and keep themselves aloof from other Bedouins; they are very poor, owing to the drying up of the Peninsula in recent years, caused by cutting down the timber; they are divided into several minor tribes not necessary to mention, as the whole of the fighting men would not number more than 600.

The *Sowârkeh* are said to be a powerful tribe; they live about Al Arish, and have horses. To all appearances they are a poor tribe. They carried on a successful war with the Terebîn for many years, with whom they have a blood feud.

The *Msaid* are a poor tribe inhabiting the Suez Canal on both sides, near Kantara; they are a branch of the Lehewat.

The *Tomeilat* live on the west of the Canal, about the Wâdy Tomeilat. Their Sheikh Ibrahim is a man of some weight among the Bedouins, though his tribe is not of much account.

The *Mûtsch* live in the mountains west of Suez ; they are well-known marauders, and often travel several hundred miles in their looting expeditions. They are the finest of the Egyptian Bedouins, and would make magnificent soldiers if brought into tolerable discipline.

The *Teyahah* are a powerful tribe inhabiting the desert of the Tih and "South Country" ; they are a very warlike tribe, and are, in many cases, well-disposed towards Franks ; they have been in the habit of conducting tourists through their country from Neckel to Gaza.

9. The number of fighting men between the Suez Canal and Palestine has been very erroneously computed, having been often stated as 50,000 to 80,000 ; at the very highest estimate it is not likely to be more than 10,000, and of these a large number must always remain on the lands to guard the flocks.

THE PENINSULA OF SINAI.

10. The Peninsula of Sinai is described in the "Ordnance Survey of Sinai," and in Professor Palmer's "Desert of the Exodus."

The Plateau of the Tih, rising to an altitude of 4,000 feet above the sea, projects into the Peninsula, and terminates abruptly in a limestone wall 1,500 feet in height, overhanging the sandy plains of Er Ramleh. This sandy plain is probably formed by the disintegration of the sandstone underlying the limestone.

Wherever the strata of sedimentary rocks were observed near the granite walls of the Peninsula, they were seen to have this horizontal position, and gradually become more and more tilted up as they approached the granite. It appears, therefore, to be probable that the sandstone and limestone foundations, once overlying the granite, have been removed by denudation.

11. The granite and other volcanic rocks, which now constitute the greater portion of the Peninsula, have evidently been filled in to some extent with sedimentary deposits, which again have for the most part been subsequently cleared out. In some cases the deposit, which is of a marly nature, has not quite been removed, and still fills up the lower portions of the valleys. It is to be seen in the Wâdy Feirân, Hebran, Ghurundel, &c. ; and in all these valleys springs of water are to be found, as the rainfall cannot penetrate the marly floor, and has to run along its surface to the sea.

In other instances, where this deposit has disappeared and loose sand has replaced it, there is no water to be found.

The rainfall in the Peninsula is at the present time considerably less than it is in the Desert of the Tih, and the drought is excessive. This drought is ascribed to the gradual decrease of the trees—a decrease which has been going on steadily for the last thirty years, since the Egyptian Government imposed a tax of charcoal upon the Bedouins.

Should the Government alter this tax for one which would induce the Bedouin to grow trees, such as a tax of so many muids of dates, it is probable that trees would again flourish in the Peninsula. The cutting down of trees for charcoal should be prohibited, except in districts where trees are over-abundant and require thinning.

12. I was shown many places in the valleys where there had formerly been mazaireh (cultivated ground), but which has now been abandoned for years on account of the drought. In these places there were still existing the corn magazines and watch-houses, and the portion of the ground that had been subject to the plough was distinctly visible.

13. There are extensive palm-groves in the Wâdy Feirân and at Tor. Every Bedouin family has its garden of palm-trees. The fruit serves for food for the human beings, while the date-stones are boiled down for the goats.

There are several places in the Peninsula where the water might be dammed or stored up, but there are not such facilities for this here as in the Tih.

14. The Peninsula is principally inhabited by Towarah, but there are also a few families of Terebin, Haiwatats, Debûr, and Genounheli. They are all very poor. The Towarah are industrious, and are so poor that they have to eke out their living by driving camels for hire, and go into Egypt to act as servants in gardens. They have much work in connection with the Convent of Sinai, and see so much of tourists in the Peninsula, that they have less active prejudices against Franks than other Bedouins, and consequently are looked upon with doubt and suspicion by their neighbours.

In time of war they are not in the least likely to side with Christians, unless they are sure they are likely to be their future masters. The remark of the Bedouin is a very natural one : it is, "If I do anything for you openly, what is to become of me when I lose your protection?" The Towarah are not a warlike race, but they would defend their own mountain passes against great odds, or they might fight in the open in a fit of enthusiasm.

About the year 1869-70 they were ordered to assist in guarding the new Suez Canal ; but Musa Nuseir, their head Sheikh, refused to do so, on the grounds that the Towarah had nothing to do with the country about the Canal, as they lived beyond it. He was cast into prison on this account, and remained there several months, but eventually succeeded in proving his assertion, and was released.

The Towarah do not now contribute towards the safety of the Canal in any way. It appears that there are very ancient archives in the bureau at Cairo, from which Musa Nuseir proved his case.

15. Musa Nuseir is the hereditary chief of a tribe, and is also Sheikh of all the Sheikhs of the Towarahs, but he is not the Sheikh of all the Towarahs. There is none ! He has very little active power among the Bedouins, but he is a singularly upright and honest man, and exercises a strong moral influence upon the people by his good example and straightforwardness.

It is often stated in books that Musa Nuseir is the chief Sheikh in the desert: this is a very grave error. He has no power whatever among the Terebin, Haiwatat, Teyahah, &c., though his opinion as a councillor in the assembly of Sheikhs would be very highly esteemed. Personal influence goes a great way among these people, but intrigue counteracts it.

In such a case as the recent war, when sentiment ruled the Bedouin, the common-sense arguments of Musa Nuseir would be voted as ridiculous and out of place.

He is said during the war to have exercised some considerable control over the Towarah, and to have prevented their breaking out and sacking Tor. It is probable that his arguments among his own particular tribe may have acted as a wholesome check, but there is little doubt that Tor would have been sacked by the Towarah had not preparations been made for the defence at the proper time. Many of the Towarah took more heed of the messages of Arabi, sent through the Haiwatats, than of the arguments of Musa Nuseir.

THE TIH.

16. The plateau of the Tih, or Desert of the Wanderings, rises to a height of 4,000 feet above the sea at its southern end, and slopes down gently towards the north until it is lost in the sandy dunes fringing the Mediterranean coast.

It is formed of nearly horizontal strata of limestone, but here and there is found a fault, when sandstone is visible. The Tih consists of one vast plain, intersected towards the south by deep fissures, and is broken in places with mountain ranges, the principal of which are Jebbs Raha, Bodieh, Moghara, Yeleg, and Hilal.

17. The soil and vegetation of the Tih is very variable. There are many places where, for eight or ten miles at a stretch, the ground is hard like rock, and covered with pieces of broken flint, without a scrap of vegetation of any kind. In other places the ground is for miles as smooth as a bowling alley, with a hard, compact white surface, with no place for vegetation. In other parts there are stretches of hard sand, with scanty shrubs here and there.

But traversing all these there are to be found, at intervals, broad, shallow watercourses called *seils*. These are in many cases 100 yards or more wide, and in them are to be found shrubs all the year round, and after heavy rains the grass springs up in them and there is good pasture for several weeks for camels, sheep, and goats.

These *seils* are very slightly depressed below the general surface of the ground, and, when the rain falls, they present the appearance of broad rivers, 100 yards across, and from one to four feet deep. These waters might be run into dams, as is done in South Africa, and kept for summer use.

18. The so-called *River of Egypt*, or Wâdy al Arish, is a large *seil* commencing at the southern end of the Tih, and running a course of about

150 miles before it enters the Mediterranean near Al Arish. This river is, as a rule, a dry and shallow watercourse ; but at times, for a few hours, it is quite full of water to a depth of three to four feet. The beds of the large seils are very uneven, and the water will lie in the pot-holes for some weeks after heavy rains. Generally in January and February there is plenty of rain over the Tih—so much so that water for drinking, both for man and for herds, can be found every few miles in the plain, and all over the hills. During November, December, and March, there are often dense mists, moist fogs, and heavy dews, which saturate the shrubs with moisture, and even deposit moisture among the rocks, so that flocks do not require to go to water. These mists depend upon the wind, and often alternate with intense droughts.

19. The rainfall may perhaps be roughly estimated as 12 inches per annum, and appears to be considerably in excess of many of the pasture lands of South Africa. In fact, a great portion even of the desert proper only differs in degree from the sheep farms of South Africa. It will always remain more or less a desert at certain times of the year, but it is a desert which might with advantage be inhabited by farmers with settled homes.

20. There are very few springs in the Tih, and during the summer the Bedouins are often in great straits for water. The principal permanent springs may be enumerated.

Along the western edge of the Tih platform, Marbrook, Moses Wells, Wâdy Sudur, Elifih, Ghurundel.

In the Sinai Peninsula the springs about Sinai: Wâdy Feirân, Hebran, and Tor.

The springs in the Wâdy Al Arish : springs at Moghara, and in the sand dunes about Mahada and Gatieh, where there is fresh water near the surface over a stretch of several square miles.

21. As it is known that there are not only goats, but also a great number of sheep in the desert, it is obvious that there must be food for them. Sheep do not thrive during the hot weather, and at that time are not found to be such good mutton as goat. These sheep are of a very hardy nature, and ewes great with young have been known to travel thirty miles a day for four days without injury. When on the line of march, they generally first suffer from abrasion of their heavy tails.

The price asked for a sheep in the desert is four times that asked in the Jordan Valley, and they often cannot be obtained under 25 to 30 shillings. This excessive price indicates that there is a difficulty in rearing them. During the time we were in the desert, from September to March, we were not able to obtain any milk from the goats or sheep, except during the last month. In Palestine the sheep give milk during the winter.

There are no cattle of any kind in the desert. The only domestic animals seen were—sheep, goats, dogs, donkeys, camels, and horses. The latter are only found in the pasture lands between Al Arish and Gaza, and towards the South Country. Horses can be taken all over the desert, provided camels are taken with them with a supply of water.

22. The Bedouins congregate together during the summer and autumn, near the springs of water and palm-groves. In the spring they have grass and water everywhere, and are free to go where they like. In the winter they are in great straits, for they have to go where they can find herbage, and yet have to drive their flocks to water, sometimes a distance of twenty or more miles. This they do about twice a week, sending the camels for water for their camp when they have quite run out of water.

When visiting camps, it was not unusual for Bedouins to show that they had not a drop of water even for making coffee until the arrival of their camels, and I have sometimes found it necessary to provide the water for making their coffee, which, however, they have always scrupulously offered to return as soon as they have been enabled to do so.

23. It is quite a mistake to suppose that the Bedouins of this desert do not grow corn. Each tribe has its cultivated land (as well as its palm-groves), and they grow as much corn as they require for their sustenance. There are extensive Mazeirah in Wâdy Er Raj, on the Tih itself, and in various out-of-the-way places which travellers do not see.

Near Wâdy Sudur, on the summit of Jebel Rahah, at a height of 2,290 feet, is a large tract of Mazeirah, on which the Dubur and Terebin grow their corn. This spot is chosen, both because the soil is fertile and because the sea breezes, charged with moisture, deposit water, in the form of rain or mists, on the high grounds early in the morning. In other cases the Bedouins have joint lands with the fellahîn living on the outskirts of the occupied lands of Egypt and Palestine. A family or portion of a family of Bedouins will go a hundred miles or more, quite beyond the tribe, to cultivate land for corn.

The connection of the tribes one with another is difficult for Europeans to comprehend; it seems so contrary to the whole rules of Bedouin life as usually laid down. All the desert tribes have their allies or relations among the Bedouins or fellahîn in the cultivated portions of Palestine and Egypt. For example, the Aligat tribe of the Towarah are allied by marriage with the Nifiat of the Nile. No doubt this was at first dictated by policy, in order to secure themselves friends respectively in the desert or cultivated country; but it cuts both ways, and anybody who takes the trouble to investigate and understand these relationships will find it comparatively easy to make arrangements with tribes in the desert, however far they may be. In fact, with a reliable Government in Egypt and Palestine, the desert ought to be a safer place for life or property than any large European town possibly can be.

THE SANDY DUNES ABOUT THE COAST OF THE MEDITERRANEAN AND SUEZ CANAL.

24. These dunes are gradually sweeping onwards, and have already engulfed the old pasture lands of Goshen. They are caused, for the most part, by the blown-sands off the sea-shore, which are constantly moved inland by the prevailing wind.

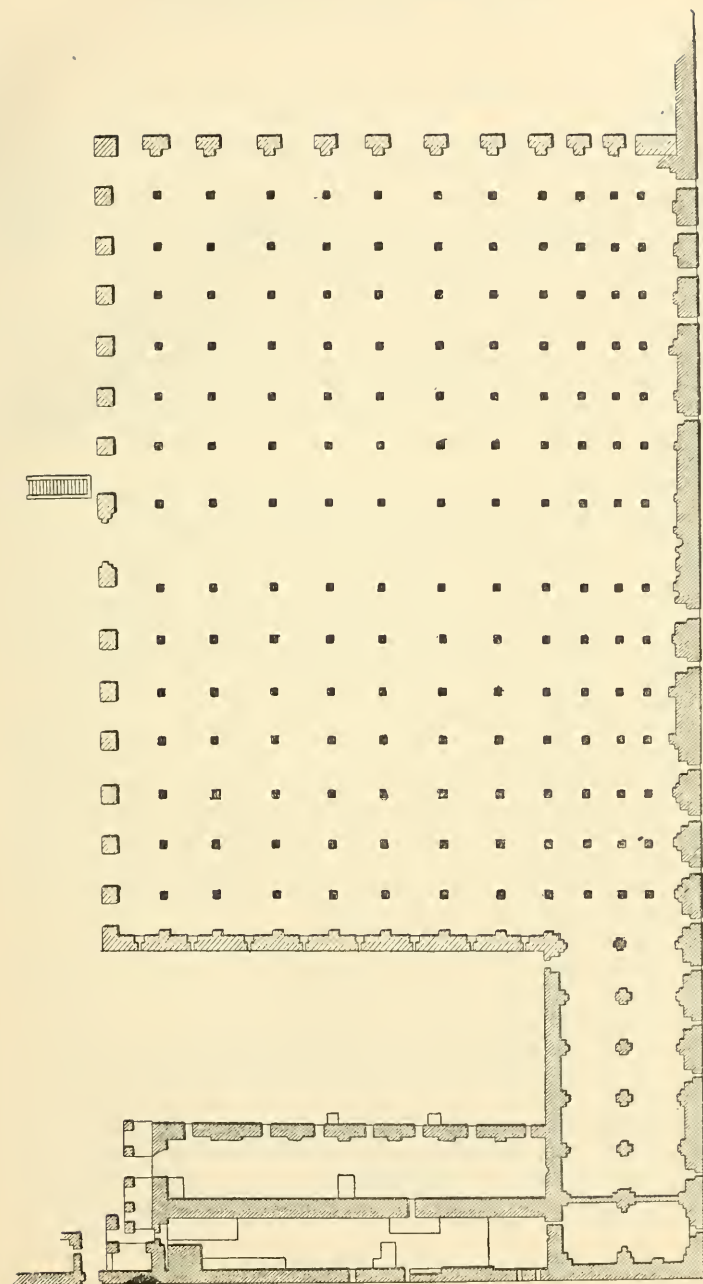
The process is as follows :—The sand, when blown inland from the sea-shore, moves slowly forward in a succession of small waves, about $1\frac{1}{2}$ inches from crest to crest. Each wave has a gentle slope of about 10° towards the direction of the wind, while on the lee side it has an abrupt slope of about 30° . Each grain of sand is blown up the gentle slope, and falls by its own weight down the steep slope; thus the waves themselves have a small progressive motion. These small waves, from one cause or another, accumulate into large waves, which in some instances rise to the height of 300 to 400 feet. These large waves, like the small ones, have a gentle slope towards the wind, and a steep slope away from the wind. The sand falling down the steep slope at certain times makes a peculiar musical note from the vibration of the particles. These large sand waves or dunes are continually in motion. The motion is rendered very conspicuous owing to the effect it has on the telegraph line between Kantara and Al Arish. Telegraph poles placed near, or in the hollows, soon get covered up if not constantly moved, and those towards the crests of the dunes are left suspended in the air. The palm-trees at Gatieh, in the same manner, are covered up for awhile, and subsequently exposed. The shifting dunes extend inland from the sea to a distance of from fifty to eighty miles, as far as Jebel Yeleg and Jebel Hilal, and are only arrested in their onward course by the mountain ranges. In some cases the outlines of these ranges, as in Jebel Raha, are quite covered up.

There cannot be any extensive growth of shrubs on sand so continually shifting, and there can be no springs of water, with certain exceptions, which I will mention. The district of these sand dunes is looked upon with a certain amount of awe by the Bedouins, who rarely traverse it during the hot months, as water is so scarce, and there is danger if they lose their way.

The exceptional springs are those such as at Mahada, about thirty miles from Ismailia, which have been preserved in a remarkable manner. They are the old springs which were in use many hundreds, probably thousands, of years ago—possibly the springs used by the children of Israel living in Goshen. As the sands encroached, the shepherds using these springs have carried the sand away from their immediate neighbourhood, and this going on for hundreds of years has resulted in craters in the sand 300 to 400 feet, at the bottom of which the springs are found.

The land of Goshen is thus engulphed by the sand dunes, but it is there still underneath the sand, and fertile as in days gone by.

About Gatieh, between Ismailia and Lake Serbonis, there is fresh water underneath the soil in many places at a depth of a few feet, and here there are forests of palms, said to number 70,000. These are the property of the various tribes and families inhabiting the desert.



THE MOSQUE EL AKSA, AS IT WAS.

THE MOSQUE EL AKSA, JERUSALEM.

THE volume lately issued by the Palestine Pilgrims' Text Society, viz. "The Travels of Mukaddasi," translated from the Arabic by Mr. Guy le Strange, gives a most interesting account of various sites and buildings in Palestine at the time of his journey, viz., *c.* 985 A.D., the details of which are increased in value to the archæologist by careful notes added by Mr. Le Strange.

Mukaddasi's description of the Aksa is the most detailed account of that Mosque which is known to me; and by comparing it with the statements given by Nassiri Khasrou, who visited and described it, *c.* 1040, and by Edrisi, *c.* 1150, we obtain an idea of the grandeur of the Mosque after its restoration, or rather rebuilding, in the eighth or beginning of the ninth century, which seems to show that it surpassed even that of Damascus.

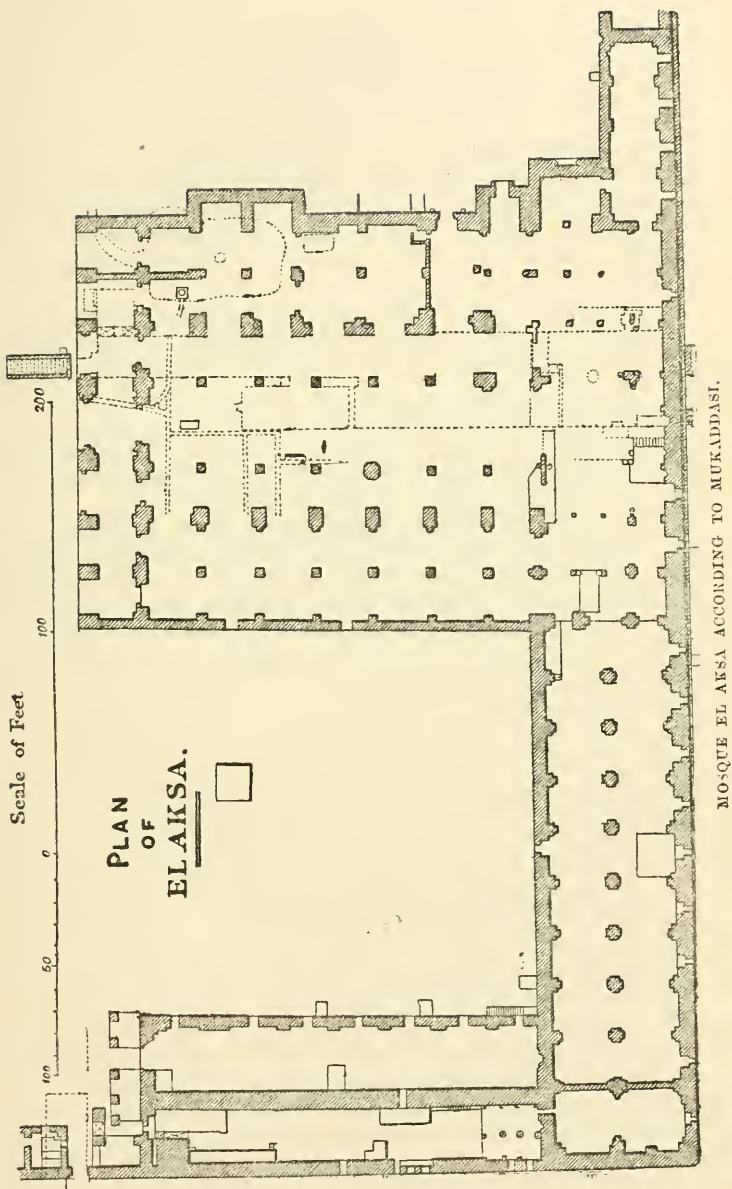
The plan of the Aksa, in its present state, is given accurately, to a large scale, on the map of the Haram Area, &c., made from the survey by Sir Charles Wilson, and this, allowing for alterations known to have been made in the eighth century, was considered by Count de Vogüé to represent the great Church of St. Mary, built by command of Justinian, and of which Procopius gives a detailed account in his book, "*De Ædificiis*," recently translated for the Palestine Pilgrims' Text Society by Mr. Aubrey Stuart.

But the present remains show very slight traces of so magnificent a building as that described by Procopius, and it is now clear, from the above Arabic authors, that the Mosque, as restored after the great earthquake in the eighth century, is very feebly represented by the present structure, which has seven aisles running north and south, with seven doors opening, on the north side, towards the Dome of the Rock, whereas it appears, from the descriptions given by the above-named Arabic authors, that the original Mosque had fifteen aisles, with fifteen doors opening northward, and eleven doors to the east.

Courts are described surrounded by colonnades of marble columns, halls vaulted with stone, and whose ceilings are decorated with mosaics, the main building itself having "a mighty roof and dome."

The idea altogether conveyed is that of a Mosque resembling more what we can see realized in that of Damascus, than the comparatively poor remains of the Aksa, which, picturesque as they undoubtedly are, occupy but one-half of the space of the old Mosque, and are built up of the poorest materials, the only exception being the great columns of the central aisle. And it would appear, from Mukaddasi's account, that these are the sole remains of the original Mosque.

T. HAYTER LEWIS.



NOTES.

I. THE STONES OF JERUSALEM.

THE reddish rock "misseh" is to be found in the valley in which the Convent of the Cross is situated, even northwards to the watershed, but it is also found on other places west (not east) of Jerusalem. But I have to mention that the word "misseh" does not only mean this reddish stone, but also others which are white or green: it is the classification of hardness, not of colour.

At Jerusalem there are the following classes of stones :—

1. *Hower*, very soft chalk, hardly to be called rock, as it is so soft and brittle. Pounded and mixed with lime it makes the mortar for fireplaces and bake-ovens.

2. Soft *Kakooli*, a kind of chalk, and white, soft.

3. The common *Kakooli*, a soft limestone, easy to be dressed; many houses are built from it, the best is brought from the east side of Mount Olivet and Anathoth, but it is found also in other places.

4. *Nahre*, a kind of conglomerate, in various degree of hardness, some so brittle that it falls by-and-by to sand; others bordering on flint; between them a great variety. *Nahre* means the firestone—i.e., the stone which stands against fire. All others crack when heated or become lime; not so this one, so all fireplaces and ovens are made with it when bricks cannot be had. As they are also especially light (not heavy), so they are used for the arching of the vaults, in new (and found in old) houses.

5. Then comes a stone between *Kakooli* and *Meleki*, very often used at building, as the dressing is easy; then comes—

6. *Meleki*, or the royal rock, the best stone for dressing and building; as it is not so hard as *Misseh* it cannot easily be dressed, and thus it stands against the atmosphere, as the *Kakooli* is affected more or less by the latter, and by wet and frost, not so the *Meleki*.

Of this there are of various degrees; some are intermixed with other stuff and so exposed to breachings, &c.; then comes—

7. *Misseh*, of which there are several kinds :—

(a) Soft *Misseh*, white.

(b) Soft *Misseh*, reddish.

(c) Hard *Misseh*, reddish or white.

(d) Hard *Misseh*, white or green, or some yellowish.

(e) The hardest *Misseh*, or *Jehudeh*, as the workmen call them, as it is most difficult to deal with them.

(f) Flint, generally brown, interwoven with white stripes.

Then there are also some more in regard of the size and form of the stones :—

Gardad—Flat, hard, about 8 inches to 1 foot thick, and 3 or more feet long, broken out from layers.

Makatin—Of the same form but much smaller, only 3 to 4 inches thick, generally used for arches, as they are very hard and durable, and easily worked to arches.

Akkat—The general arch-stones, rough, flat pieces, not hewn, mostly made of the Nahreh, for cisterns and arches which must be strong, also from Kakooli or Misseh.

Shakat means, generally, simply stones for a wall of the size that a camel may bear two of them.

Akkabe—Long and narrow stones for thresholds or lintels for door and windows.

II. NEWLY DISCOVERED ROCK-HEWN TOMB AT KOLONIEH.

IN winter 1877-8 became by the much rain the brook at Kolonieh to a grand stream, which carried off one of the arches of the stone bridge there. As the pier had also gone, so in winter it could not be repaired; but in order not to stop communication a wooden bridge was quickly made, which lasted for seven years, but had to be replaced by a stone one, which was done in 1885, and stones for it squared in the neighbourhood; by doing so a rock-hewn tomb was discovered. The proprietor of the ground came to me saying that he had found a cave, and in it tombs, paintings, and other things, and that I should go and see it. In general, reports of this kind are exaggerated, yet Kolonieh proved an exception; for I went next day, 31st August, there, and found more than I had expected. About 500 to 600 feet south-east of the bridge in a vineyard the opening was shown to me. The arrangement was of a kind which I had not seen before anywhere. It will be understood from figs. 1 and 2 of the adjoining plans and sketches.

When the earth of a few feet thick had been removed there were four long and narrow stone slabs horizontally laid (see figs. 2 and 4), and when these were taken off there was a hollow or small artificially made cave, the slabs resting on one side in a groove in the rock scarp, on the other of some masonry, as the rock there was not high enough. Across this little cave was, along the scarp wall, a vertical hole, and in it an upright stone flat, of equal thickness, (*a*) of a square form, a rock ledge (*b*) keeping it in this situation. Towards the upper end the stone has a hole through which a rope might be slung, and so by pulling it might be lifted upwards and out of its position, and by this means the tomb opened.

The opening (only about 1 foot thick) in the rock scarp wall is square, about 1 foot 6 inches wide, and 1 foot 10 inches high. Inside there is, 1 foot 5 inches lower, a 1 foot 1 inch broad stone bench, and from it three steps led down to the bottom of the rock-hewn chamber, 4 feet deeper (or lower) than the lower part of the entrance. The cave or chamber has a square form, but as the plan (fig. 1) shows on the side of the entrance wider ($14\frac{1}{2}$ feet) than on the opposite side (12 feet 2 inches), also the other two sides are differing, the northern 10 feet, the southern 11 feet.

FIG. 1.

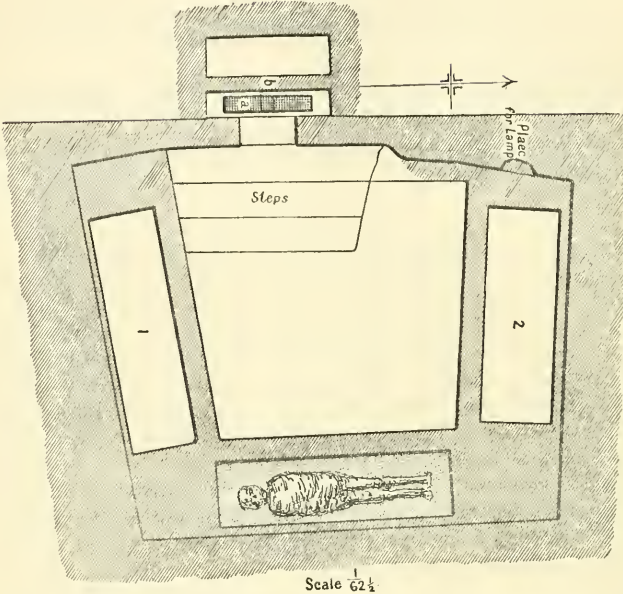
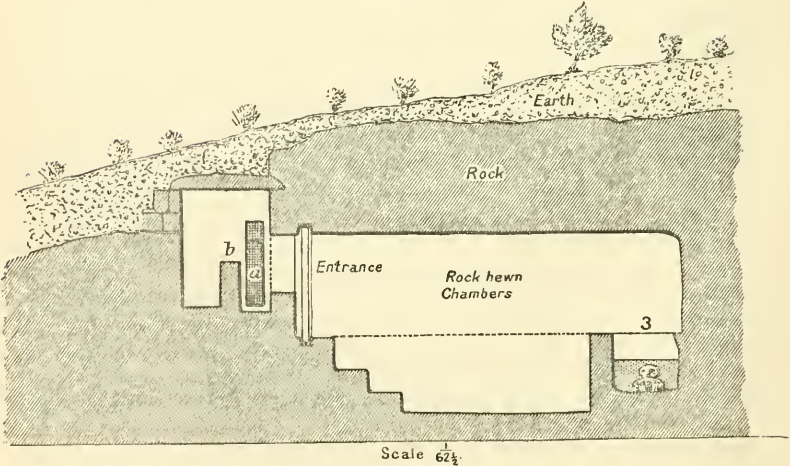
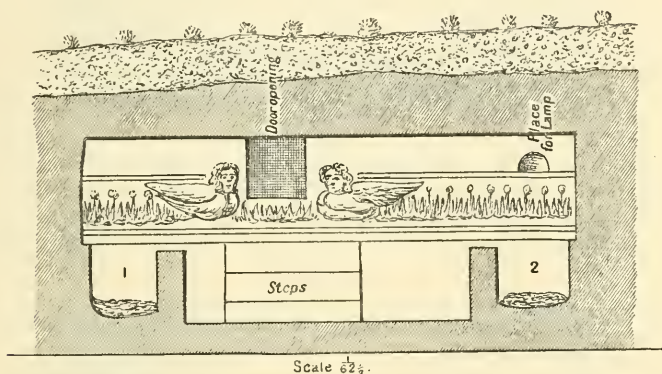


FIG. 2.



The height is on an average 5 feet 6½ inches, the bottom even, but the ceiling a little shelving or inclined. On three sides there are rock-hewn troughs or tombs, each very nearly 2 feet wide, 1 foot 9 inches deep (cut perpendicular), and on an average 6 feet 6 inches long. The shortest width, 6 feet 2 inches, is the northern, and the longest width, 7 feet 3 inches, the southern. In these two latter, Nos. 1 and 2, there was human dust intermixed with a few very decayed bones, but in the eastern width, No. 3, which is toward the hill (as fig. 2 shows), I found nearly full of water, and in it a preserved skeleton, and, as I afterwards learned, of a

FIG. 3.

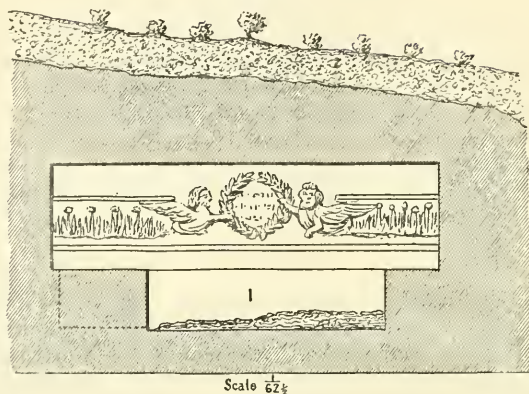


woman. It seems the water coming out from the higher layer of the rock bearing with it some lime stuff, covered the bones with stalactite and preserved them, as in the other two there is only moisture, but no water, and so the decaying took place.

But the most remarkable thing I found was fresco painting on the walls, being first plastered, and the painting (still in very good preserved colours) afterwards put on. On the ceiling there is no plaster, but the painting put on the rock surface and afterwards burnished, as it looks still so. On the north and west sides the paintings are still visible, but by moisture decayed so much that nothing can be comprehended or made out; the western and southern sides were preserved when the cave was opened, but a few days after the plaster fell off. As I came soon enough I could copy them, which I give in the drawings. There are red stripes or lines, and between green leaves with red flowers, and in the middle a pair of winged figures with heads of a child, *i.e.*, cherubim; they look very friendly, and have black hair; the body like a dove.

On the west side there is between them the entrance hole, but between the pair on the south side is a green wreath (of green leaves) bound at the bottom with a brown riband, its ends hanging down ending in heart-shaped forms.

FIG. 5.



And in the field, inside the garland is a Greek inscription, the cherubim having each only one arm holding the wreath. Similar drawings are on the ceiling (see drawing No. 6); there are also two branches of brown colour. These figures on the ceiling are much larger and of full human

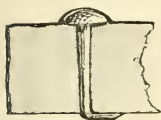
FIG. 6.



size, or rather even larger, and have long garments, but also only one arm. No cross could be found anywhere, nor on the heads of the figures any rings as of saints; still the inscriptions declare the tombs to be Christian. On the western wall inside there is a niche for a lamp, and the upper part is blacked, so that it must have been used in such a way.

On the rock bench inside the entrance there were lying a quantity of

FIG. 7.



large iron nails, with remarkably large round heads, and the points bent or rivetted; also an iron ring (see No. 7, where it is given on a larger scale), formerly apparently belonging to a wooden door, which must have been (according to the nails) $3\frac{1}{2}$ inches thick. On the rock are holes for the upper and lower hinges of the apparently wooden door, and for the bolt in the middle on the other side. The wood was entirely rotten, and nothing left of it.

It is curious that although the tomb could be shut up with the stone slab above described, yet a wooden door was made. This gives me the idea that the tomb may have been originally Jewish, and then afterwards used by Christians, or (and this is much more likely the case) the tomb was for a certain time used as a kind of a chapel, or an anchorite lived there for a time.

FIG. 8.

The Inscription

ΕΙCΘΕΟC
ΚΑΙΟΧΡΙCΟC
ΑΥΤΟΥ

The Inscription

ΩCΖΗ
ΑΝΗCΕΝ
ΒΑΡΩΧΙC

The Russian Archimandrite told me that the figures and inscriptions belong to the third century, and that the inscription on the wall is the words of the malefactor on the Cross, "Lord, remember me." The one on the ceiling to be read: "God and His anointed" (Christos).

CONRAD SCHICK.

JERUSALEM, November, 10th, 1886.

THE SIZE OF THE "CITY OF DAVID."

THIS topic is touched upon by C. R. C. in a short paragraph in page 82 of the *Quarterly Statement* for April, 1886, and one is surprised to find that, after passing by, without reply, the chain of evidence brought forward by the Rev. W. F. Birch in the *Quarterly Statement* for 1885, and in the January number of the current year; he should have seized upon the mere indication (in a plan) of the area within which it is suggested by Mr. Birch that excavations should be made, in order to search for the sepulchres of the Kings.

I can scarcely understand how it is that all the indications which point

to one position should practically be considered valueless because that site is of limited size and is not adequate in extent to satisfy C. R. C.'s idea of a *city*.

And yet the very fact that the smallness of the site is considered to militate against the adoption of Mr. Birch's views on the position of the "City of David," shows that that investigator and his opponent C. R. C. are really contending about two different things.

Mr. Birch is writing of the "City of David" as described in the Bible, while C. R. C. seems always to be thinking of David's capital, or, in other words, of the City of Jerusalem. For this reason I wish to point out once again that the phrase "City of David," as used in the Bible, is really a technical term, applied to a part of Jerusalem, and to a *part only*; and not only so, but that its use *does not in any instance carry with it the implication of extensive area*.

The parallel passages, 2 Sam. v, 7, 9, and 1 Chron. xi, 5, 7, show that it was merely the *stronghold* (of Zion) or *fort* of the former passage; and the *castle* (of Zion) of the latter, all representing *one* word, in the original; which, on being captured by David was called by him the "City of David."

These passages would naturally imply a restricted area, rather than require an extensive one, and I think I am on firm ground in challenging proof of anything in either of the remaining passages of Scripture in which it is mentioned, which implies any increase of its requirements.

These references are numerous, but the bulk of them are merely statements that the Kings, &c., were buried there, as given at length in my note on "The Sepulchres of the Kings," &c., in the *Quarterly Statement* for 1882.

Besides the verses I have mentioned above, and those that are brought together on pages 267 and 268 of *Quarterly Statement*, 1882, I believe the "City of David" is mentioned *only* in the following places:—

2 Sam. vi, 10, and the parallel, 1 Chron. xiii, 13, record the failure to bring the Ark from Gibeon into the City of David, and its being placed in the house of Obed Edom instead.

Next, we have the completion of David's design, when the Ark was removed from the house of Obed Edom into the City of David, which is spoken of in 2 Sam. vi, 12, 16, and in 1 Chron. xv, 1, 29.

1 Kings iii, 1, states that Pharaoh's daughter was lodged in it by Solomon, and 1 Kings ix, 24, with the parallel verse, 2 Chron. viii, 11, mention her removal therefrom to her own "house."

The removal of the Ark from the "City of David" to Moriah is the subject of both 1 Kings viii, 1, and 2 Chron. v, 2, and the repair of its ramparts is the burden of 1 Kings xi, 27—a need which recurred later on, as mentioned in Isaiah xxii, 9, and 2 Chron. xxxii, 5.

The "City of David" is again spoken of in the 30th verse of the last-mentioned chapter, in connection with the alteration of the course of the water of Gihon, and the building of a wall round it by Manasseh is recorded in 2 Chron. xxxiii, 14.

There remain only two passages more where the term occurs, and these are in the account of the rebuilding of Jerusalem after the exile, viz., in Nehemiah iii, 15, and xii, 37.

In *none* of these cases is there any question of size involved, and certainly nothing to show that any more was ever included in the term than the *Fort*, which originally received the name. Moreover, as C. R. C. will hardly need to be reminded, the Hebrew word for city in this phrase does not imply a *walled* city, so that no argument for its extent can be found in the name itself (as seems to underlie the English word), though of course, as a *fortress*, it would have ramparts and walls, as we are expressly told that it had.

In conclusion, I trust that we shall soon find the idea exploded that the "City of David" of the Bible was either identical with Jerusalem at large or was necessarily of larger area than could be located on the hill now known as Ophel, where every topographical reference combines to place it.

H. B. S. W.

August, 1886.

THE "ROCK ALTAR" OF ZORAH.

HAVING read Captain Conder's note on the "Rock Altar" of Zorah (*Quarterly Statement*, October, 1886, p. 166), I shall feel obliged if you would permit the following description of it extracted and translated from a paper by Mr. Schick on "The Home of Samson" in the German Magazine, "Neueste Nachrichten aus dem Morgenlande," No. 2, Berlin, 1886, to appear in the pages of the next *Quarterly Statement*. I forward likewise by this mail a copy of the number of the above-named German periodical containing Mr. Schick's paper, p. 89-107.

On pp. 100 and 101, Mr. Schick says:—"On the declivity of the north-western hills, about 700 metres distant from and below the village of Surah" (Zorah), "there exists a regular rock altar within the bounds of the Artouf lands. It is in die-form, but decreasing in size towards the top in steps; the length and the breadth are each $3\frac{1}{4}$ metres. It rises about 2 metres out of the ground, and was hewn out of the rock in such a manner that its four corners point exactly to the four points of the compass. "On two" opposite "sides steps led up to a small platform, on which rises the altar table" (or slab) "in length and also in breadth 1.48 metres and 0.25 in height, but which has a portion 0.90 metre long and 0.37 broad cut away, probably for the standing place of the priest. The upper surface" (of the altar slab) "is horizontal, and furnished with round hollows of various sizes cut into the surface and connected by grooves.

"Only the upper steps have been preserved, the others have fallen off and lie in fragments near the altar in the ground. The altar stands in the

open field, but near a rocky ridge out of which it and the surrounding area have been hewn."

I would here take the liberty of interrupting Mr. Schick's description in order to remark that the result of the excavations round the base seem to show that the altar was not "hewn out of the rocky ridge," but that it is simply a huge limestone boulder, resting on a stratum of white marly rock, and does not appear to have been connected with the adjoining rocky ridge when hewn into altar-shape.

Since Captain Conder first suggested that it was the remnant of a quarry, I have frequently visited the spot, and though I have searched carefully I have not succeeded in finding any traces of the supposed quarry. I do not even think with Mr. Schick that the area surrounding the altar was "*hewn* out of the rocky ridge." That it may have been *broken* out I am willing to allow, but not that it was *hewn* in the sense of hewing with pick or chisel. But it is time to return to Mr. Schick's description.

He continues: "As we know from Judges xiii, 19, that Manoah actually offered his sacrifice upon a rock, one cannot go far astray if one supposes that this altar is the very same, either that it then existed as such, or, which appears more probable, that having in a certain measure become hallowed and consecrated by this event it was later on hewn into a formal altar to serve thereafter as a place of worship. It is certain that at the time of the apostasy, when the worship of high places was in its bloom, sacrificial feasts were often held here where the ascending smoke could be seen in the whole southern district at a distance of several hours."

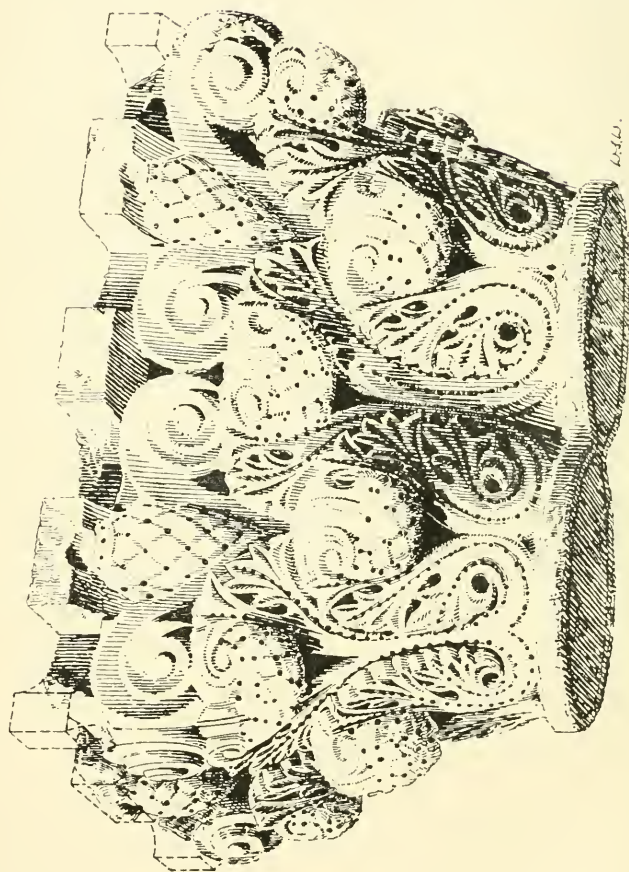
Thus far Mr. Schick, at whose expense the stones and soil round the monument were cleared away and the base laid bare by excavations.

I am glad that he as well as Dr. Chaplin agree with me in supposing it to be an altar, and I hope that some day not very far in the future Captain Conder will return to Palestine, and on visiting the spot be relieved of the "great difficulty he now feels in accepting it."

JAMES EDWARD HANAUER.

JERUSALEM, *November 27th*, 1886.

CAPITAL FOUND IN THE TEMPLE AREA.



W. S. Cattell & Co. Eng.

BYZANTINE CAPITAL FOUND IN THE HARAM AREA.

THE Committee have received a capital which has recently been found in some excavations at Jerusalem and saved from the lime-kiln. It was choked with lime and dust, but on being carefully cleaned appears now to be almost perfect, and the edges of the leaves, &c., as sharp as when they left the sculptor's hands. The material is a white marble slightly stained. The capital is a double one, over coupled columns, the horizontal line of the necking being continued through. The carving has the Corinthian abacus and volutes clearly indicated, the main features being bunches of grapes and flat leaves, with grapes in place of the curl of the leaf which is so prominent in mediæval capitals. The whole is very sharply cut and drilled in the true Byzantine style. The abacus is $19\frac{1}{2}$ inches long, $10\frac{3}{4}$ inches broad, and $12\frac{1}{4}$ inches in height, and from centre to centre of column 9 inches, and it evidently formed part of a detached colonnade, as the carving is complete on all four sides. The drawing which faces this is very kindly presented to us by Mr. W. S. Weatherley.

There are several coupled columns and capitals in the building known as the Mosque of Omar in the south part of the Aksa, and there are also some in the front of the north porch to that mosque, these being of old work reused, as is plain from some of the bases being made up of finely carved capitals reversed. The carving of the capital just received is quite different from these, and Mr. P. Pullan (one of our best judges of Byzantine art) is decidedly of opinion that it is a work of the eighth or ninth century. Very probably it may have been carved by a Greek sculptor when the Aksa was nearly rebuilt and much altered, and again restored in the eighth and ninth centuries by Haroun al Raschid and his son Mamûn. I quite agree with Mr. Pullan.

As to the grandeur of this mosque, some quite unexpected relations have recently been given to us by the accounts in Makaddasi, an Arabic author of the tenth century, whose work has just been translated by Mr. Guy le Strange for the Palestine Pilgrims' Text Society, whose translation of Procopius, by Mr. Aubrey Stuart, was recently reviewed in the *Athenæum*.

A basket capital, pure Byzantine, nearly like those still remaining at the ruined colonnade in front of the Church of the Holy Sepulchre and those to the eastern colonnade of the Aksa, has within a short time been found in excavations north of the Damascus gate, and other discoveries may confidently be expected. A small piece of another capital has been brought home recently by Canon Liddon, and is now let into the wall of the chancel south aisle of St. Paul's Cathedral. It is the upper part of one of the volutes of a capital which was, apparently, of the same design as that sent to the Fund.

HAYTER LEWIS.

MIDDOTH, OR THE MEASUREMENTS OF THE TEMPLE.

WITH THE COMMENTARY OF RABBI OBADIAH OF BARTENORA.

(Continued.)

CHAPTER II.

1. THE mountain of the house was five hundred cubits by five hundred cubits.¹ Its greatest space was on the south, the second on the east,² the third on the north, the smallest on the west. That space which had the largest measurement was most used.

2. All who entered the mountain of the house entered on the right hand and went round and out on the left hand,³ except one to whom something had happened, who went round to the left. "And what aileth thee that thou goest to the left?"⁴ "Because I am in mourning," "May He who dwelleth in this house comfort thee." "Because I am excommunicate," "May He who dwelleth in this house put into their hearts that they may restore thee." The words of Rabbi Meyer. Rabbi Jose said to him, "thou hast made them *appear* as if they had transgressed against him in judgment,⁵ but *what they said was*, "may He who dwelleth in this house put into thy heart that thou listen to the words of thy fellows and they shall restore thee."⁶

3. Inside of this⁷ was the *soreg*⁸ [or reticulated wall], ten hand-breadths high; and thirteen breaches were there which the Greek kings made. *The Jews* built them up again and ordained thirteen obeisances opposite

¹ Surrounded on all sides by a wall.

² That is to say, the distance from the wall of the mountain of the house to the wall of the court on the south side exceeded the distance which was between them on the eastern side; and the distance which was between them on the eastern side exceeded the distance which was between them on the northern side, and the northern *space was* greater than the western.

³ As if those entering by the Huldah gates, which were on the right, went round by way of the gate Tadi.

⁴ They asked him "what aileth thee, that thou goest to the left?" He said, "because I am mourning." They said, "may He who dwells in this house comfort thee."

⁵ If they said so to him, it would appear that those, his colleagues, had perverted judgment, and that his excommunication was not according to the *halachah* [not according to the decision of the oral law].

⁶ Since it was understood that he had done something not allowed by the law for which penance was necessary. The decision was according to Rabbi Jose.

⁷ Inside the mountain of the house.

⁸ A partition (or wall) made full of holes, like a bedstead netted with cords. It was made of long and short pieces of wood placed one upon another obliquely.

them.⁹ Within this¹⁰ was the *chel* [or rampart], ten cubits *wide*, and twelve steps were there,¹¹ the height of *each* step¹² half a cubit and the tread¹³ half a cubit. All the steps which were there were half a cubit high and the tread half a cubit, except those of the porch.¹⁴ All the gateways and gates which were there were twenty cubits high and ten cubits broad, except *that* of the porch.¹⁵ All the gateways which were there had doors except that of the porch. All the gates that were there had lintels,¹⁶ except the gate Tadi, where two stones inclined one upon another. All the gates which were there were covered with gold [literally, were changed to be of gold], except *the doors* of the gate Nicanor, because a miracle¹⁷ happened to them, and some say because their brass glittered like gold.¹⁸

4. All the walls which were there¹⁹ were high, except the eastern wall,²⁰ in order that the priest who burned the cow, standing on the top of the Mount of Olives,²¹ might see straight through the doorway of the Temple at the time of sprinkling the blood.

⁹ When one came opposite either of the breaches, he bowed himself, and acknowledged *with thankfulness* the destruction of the Greek kings.

¹⁰ Within this reticulated wall was a vacant space of ten cubits, which was called *chel* (rampart).

¹¹ In order to go up thence into the court of the women.

¹² Each step was half a cubit higher than the adjoining one, and also the first step was half a cubit high from the floor.

¹³ The breadth of the step, which was the place for the tread of the feet, half a cubit.

¹⁴ Except the steps which were between the porch and the altar, which were not all thus, as is taught in Chapter III.

¹⁵ It is taught in the following chapter that the height of *the porch* was forty cubits, and its breadth twenty.

¹⁶ A stone resting upon the two side posts against which the door struck, שְׁקוּפוֹת, has the meaning of מִשְׁקוּף, "upper door post" (Exod. xii, 7). [Buxtorf derives the word שְׁקוּף from שָׁקַף, *percutere, pulsare*, "Quia a jauna subinde percutitus.]"

¹⁷ As is explained in the third chapter of *the treatise* "Yoma."

¹⁸ Like gilded things (כְּזָהָבִית), whose appearance is like gold, so that it was not necessary to make them of gold.

¹⁹ In all the buildings of the mountain of the house. They were very high, in order that all the gateways which were in them might be twenty cubits high, besides what was above the gateway.

²⁰ This was the lower *gate* at the foot of the mountain of the house.

²¹ Har-Hammishcha: this is the Mount of Olives, which is before Jerusalem on the east. The face of the priest being towards the west he could see the door of the Temple over the top of the wall, through the gates which were within it, whilst sprinkling the blood, as it is written (Numb. xix, 4), "and sprinkle directly before the tabernacle of the congregation." And if the wall had been high, notwithstanding that the gates were all arranged one opposite the other, the gate of the mountain of the house opposite the gate of the court of the women, *that* of the court of the women opposite the gate of the great court, and

5. The court of the women was one hundred and thirty-five *cubits*²² long by one hundred and thirty-five *cubits* broad.²³ There were four chambers at its four corners, each of forty cubits, and they were not roofed. And thus they will be in the future, as it is said (Ezek. xlv, 21), "then he brought me forth into the outer court, and caused me to pass by the four corners of the court; and, behold, in every corner of the court *there was a court.*" In the four corners of the court there were courts smoking (קטורות, "joined," A.V.), and the reason why [it is said] "smoking" is that they were not roofed.²⁴ And what were their uses? The south-eastern was the chamber of the Nazarites, because there the Nazarites cooked their peace-offerings and shaved their hair and cast it under the pot.²⁵ The north-eastern was the chamber of wood, for there the priests who had blemishes picked the wood,²⁶ and every piece in which was found a worm was unlawful for the top of the altar. The north-western was the chamber of the lepers.²⁷ The south-western, Rabbi Eliezer, the son of Jacob, said, "I forget what was its use."²⁸ Aba Saul said, "there they put wine and oil. It was called the chamber of the house of oil. *The court of the women* was plane at first,²⁹ and they surrounded it with a balcony,³⁰ so that the women could see from above

the gate of the great court opposite the doorway of the Temple, it would not have been possible to see the doorway of the Temple through the gateways, because the mountain went and rose and ascended, until the floor of the doorway of the Temple was twenty-two cubits higher than the floor at the foot of the mountain of the house, and the threshold of the Temple was two cubits higher than the lintel of the *eastern* gateway of the mountain of the house, for the gateway of the mountain of the house was only twenty cubits high, as is taught above, so that the priest who slaughtered the eow could not see the hollow of the doorway of the Temple through that gateway.

²² From east to west.

²³ From north to south.

²⁴ Compare Genesis xix, 28, "the smoke of the country went up;" it is the same as to say מעלות עינין, causing the smoke to go up, because there was no roof to them.

²⁵ To burn it in the fire which was under the pot in which they boiled their peace-offerings, as it is written (Numb. vi, 18), "put it in the fire which is under the sacrifice of the peace-offerings."

²⁶ They rejected the pieces of wood in which was found a worm because they were unlawful for the fire of the altar.

²⁷ Because there the lepers bathed on the eighth day for their cleansing when they came to put their hands inside *the gate of the court* to have their thumbs touched with the blood of the trespass-offering, and the oil, and this bathing was requisite, even though he had bathed the evening before.

²⁸ R. Eliezer ben Jacob said, "I forget what was its use." It is understood from this, that all the above was spoken by R. Eliezer ben Jacob, and thus it is taught in the Gamara of Yoma (16 a), that in Middoth the simple Mishna was taught by Rabbi Eliezer ben Jacob.

²⁹ And it was plane at the first. The explanation of Rambam is פרוצה, breached (or open), not surrounded by a wall.

³⁰ A balcony. They surrounded the court of the women with a kind of gallery, so that the women stood above upon the gallery, and the men below, to

and the men from below, in order that they might not be mixed. And fifteen steps³¹ went up from within it to the Court of Israel, corresponding to the fifteen songs of degrees in the psalms, because upon them the Levites stood and chanted. They were not long and straight,³² but curved like the half of a round threshing-floor.

6. And there were chambers under the court of Israel which opened into the court of the women, and there the Levites placed their harps and psalteries, and cymbals, and all instruments of song. The court of Israel was one hundred and thirty five cubits long by eleven broad, and also the court of the priests was one hundred and thirty five cubits long, by eleven broad, and pointed pieces of wood³³ divided between the court of Israel and the court of the priests. Rabbi Eliezer ben Jacob said "a step a cubit high³⁴ was *there*, and upon it the desk³⁵ was placed, and in it were three steps of half a cubit each, so that the court of the priests was two cubits and a half higher than the court of Israel. The whole court³⁶ was one hundred and eighty seven cubits long, by one hundred and thirty-five broad.³⁷ And thirteen obeisances were *made* there. Aba Jose ben Khanan said "opposite *the* thirteen gates."³⁸ The southern gates near to the west *were* the upper gate, the gate of kindling, the gate of the first-born, and the water-gate. And why was it called the water-gate? Because through it they brought in the pitcher of water for the drink-offering of the Feast of Tabernacles. Rabbi Eliezer ben Jacob said "and through it the waters ran, and in the future they will go out from under the threshold of the house." And opposite to them on the north, near to the west, the gate of Jechoniah, the gate of the offering, the gate of the women, *and* the gate of song. And why was it called the gate of Jechoniah? Because through it Jechoniah passed out when he went into captivity. That on the east was the gate Nicanor. And it had two wickets, one on its right and one on its left. The two on the west had no name.

see, at the rejoicings of the beth hashshavavah *at the Feast of Tabernacles*, in order that they might not be tempted to levity.

³¹ The height of the floor of the court of Israel above the court of the women.

³² *Not* long and angular like ordinary steps, but round, like half of a round threshing-floor.

³³ The heads of beams projecting and sticking out from the wall to distinguish between the court of Israel and the court of the priests.

³⁴ In the court of Israel. Its length corresponded to the length of the whole court.

³⁵ The desk of the Levites was built upon it, and made like a kind of raised seat (*atzlaba*). The height of the desk was a cubit and a half, and in it were three steps of half a cubit each, by which they went up to the desk.

³⁶ From the commencement of the court of Israel to the vacant space of eleven cubits which was behind the house of atonement.

³⁷ From north to south.

³⁸ Which he immediately enumerates. And he who said there were seven gates to the court, explains the thirteen obeisances as corresponding to the thirteen breaches which the Greek kings made in the *Soreg*, as we have said above in this Chapter. The whole Mishna is explained in the first Chapter.

THE PALESTINE EXPLORATION FUND

NOTES AND NEWS.

HERR SCHUMACHER reports a discovery of great interest from the shores of the Lake of Tiberias. It has long been known that ancient remains and ruins are scattered about on the small plain south of the modern city. These have never attracted much attention. Robinson tried to prove that the modern town stands on the site of the Herodian city. Herr Schumacher has now, however, traced the whole wall of Herod's City of Tiberias. It is three miles in length, and is in shape an oblong, the long side presented to the Lake. At its south-west corner there rises a lofty hillock, five hundred feet in height. This hillock is crowned with ruins which were noted by Lieut.-Colonel Kitchener, but he could not examine them, because at the time of his survey they were covered with high thistles. The ancient wall of Tiberias ran up, and was connected with a strong wall round this hill; within the wall are ruins, probably of Herod's palace, certainly of a fort. This then was the acropolis of Tiberias, which in the time of our Lord is now proved to have been no mean Galilean village, but a great and stately city, its wall three miles long, and for a mile in length facing the sea from which He saw it, dominated and guarded by Herod's stronghold, built on a hill five hundred feet in height. In the restoration of the country at the time of the Gospel History, the great city of Tiberias will henceforth occupy a large and important place.

The great event of the Quarter, however, has been Captain Conder's announcement that he has found the long looked-for key to the decipherment of the Hamathite or so-called Hittite Inscriptions. On Saturday, February 26th, 1887, the following letter appeared in the *Times* :—

SIR,—It is with great pleasure that I announce, through the columns of *The Times*, a discovery, the news of which I have this day received from Captain Claude Conder, R.E., the discoverer. It is no less than the reading of the mysterious Hittite inscriptions (so-called) which have baffled every attempt to decipher them since their re-discovery in the year 1872. They were first found by Burekhardt in the year 1808. You will observe that Captain Conder at present gives the world only a portion of the results of his discovery. He has, however, read the whole of the inscriptions and all the gems and seals bearing

Hittite legends. He has placed in the hands of Sir Charles Wilson and Sir Charles Warren documents showing how he has arrived at this discovery, and he has in preparation a memoir which will be published, together with complete readings, by the Palestine Exploration Fund without any delay. In anticipation of his memoir, I have only to say that the questions raised and the points illustrated by this discovery promise to equal in interest those of the cuneiform inscriptions or the hieroglyphics. One point only I will here mention, that it throws great light on the early chapters of the Book of Genesis, and explains certain names in ancient history which have hitherto been impossible to explain.

From what Captain Conder has told me, I think we may hope to produce his memoir before the end of next month. Meantime, there are reasons why the language in which the inscriptions are written and the manner in which the discovery was arrived at should be kept back until the memoir is completed and the whole story can be told at length.

I must add a word of congratulation to Captain Conder, whose patient researches into this subject for the last four years have at length been so brilliantly rewarded.

I remain, Sir, your obedient servant,

JAMES GLAISHER,

Chairman of the Executive Committee.

Palestine Exploration Fund,

1, Adam-street, Adelphi, W.C.

Chatham, Feb. 24.

TO THE CHAIRMAN PALESTINE EXPLORATION FUND.

SIR,—The decipherment of the curious hieroglyphics found at Hamath, at Aleppo, at Carchemish, and throughout Asia Minor has for many years been considered one of the most interesting questions of Oriental archæology. Many attempts have been made to read them, but none of these could be considered successful so long as the language of the texts remained unknown. It has been my good fortune within the present month to discover what that language is, and I shall, I think, have no difficulty in convincing Oriental scholars of the reality of this discovery, since not only the words but the grammar as well can be demonstrated to belong to a well-known tongue. In fact the discovery once made seems so simple and obvious that I can only wonder that it has not previously been observed.

The complete reading of the texts is still attended with difficulty—first, because of the mutilated and decayed condition of the inscriptions; and, secondly, because of the imperfections of the published copies; while in some cases symbols only once or twice repeated must remain obscure until further examples can be obtained. I have no doubt, however, that careful study of the original texts will clear up many of these minor difficulties when once the simple and obvious key to the language is recognised. I have no doubt, also, that it is already quite possible to understand the sense and character generally of all the ten principal texts at present known. I may observe that this character is known to have been used in 1400 B.C., and it is probably very much older.

Pending the preparation of a memoir on the subject, in which I propose to give a complete analysis, I attach the readings of the more important and certainly decipherable of the inscriptions. It appears that they are invocations

to the gods of Heaven, Ocean, and Earth—exactly the deities (including Set) whom we know from Egyptian and cuneiform tablets to have been adored by the Hittites and by other tribes of Asia Minor. This we ought to have already suspected, since the inscriptions in some cases occur on the bas-reliefs of deities. It is, no doubt, a disappointment to find that they are not historical, but I shall be able to show that they furnish, nevertheless, very important historical deductions, and throw a new and most astonishing light on the early history of Western Asia and of Egypt.

The discovery will, no doubt, be regarded with some incredulity until it can be demonstrated by a full account of the grammatical reading of the inscriptions, the construction of the sentences being apparently one of the main reasons why these inscriptions have not previously been understood. I have therefore placed in the hands of two well-known Orientalists (Sir C. W. Wilson and Sir C. Warren) a statement of the basis on which the discovery rests, which will serve to show that the method is not arbitrary, and that the deductions are of primary interest to all students of Oriental history.

The following (subject to improvements) is the reading of the more important texts. The first is a prayer to the sun :—

“May the Holy one mighty and powerful hear the uprising prayers. I call upon the Most High. . . . I adore my Lord. . . . Shine Lord. Great Spirit so be it. He gives me the rain of Heaven.”

A second prayer is addressed to the god of water and of the sky and ocean :—

“I pray . . . to my God of the Water, the stately Lord of Water, the God of Heaven. I make an inscription in his honour. I extol him. I cause a great libation to be made as an offering. I make an offering to the Most Holy the King of the Water. I call on the (strong?) Lord the mighty one. The (strong?) King (strong?) light : Chief God of Heaven. . . . I offer to. I cry . . . I extol (him) praying for water.”

In a third text we read as follows :—

“To Thee the mighty one . . . the powerful, the Chieftain, the acknowledged Lord be prayers made. . . . I cry with prayer to the Holy one the great Lord . . . to God and Goddess both I cry to the great spiritual. . . . Amen. I . . . to my Water God. He Set my Water God . . . chief . . . I cry to. To the beneficent god of dawn . . . I cry. To my Holy one. (May he make . . . my supplication?) Offering a libation to the God of Heaven. . . . I cause an excellent libation to be offered to him. . . . Accept my most excellent libation. The crescent moon I greatly”

This text is much injured and contains several very unusual emblems, but of its general sense there can be no question.

Another long text of the same character I have also translated, but the mutilated condition leaves it full of gaps. Altogether I have applied the language to ten of the principal texts. The seals and gems with similar characters are not difficult to read. Finally, the bowl found at Babylon appears to be a magic bowl like several already known inscribed in Hebrew characters. I have no doubt that further study will suggest improved and extended readings, but I do not expect that the substantial facts will be called in question. I ought, in conclusion, to say that I owe my discovery in great measure to the kind

encouragement which in 1883 I received from Professor Sayce in studying the texts for the first time. His own reading of a short bilingual is confirmed in a remarkable manner, though not exactly as he expected.

I have the honour to be, Sir, your obedient servant,

C. R. CONDER, Capt. R.E.

Captain Conder further writes as follows :—

“ I should like clearly to explain in the *Quarterly Statement* what it is that I have discovered concerning these hieroglyphs. The attempts of the Rev. Dunbar Heath and the Rev. C. Ball are based on the supposition that the language is Semitic, and the emblems either letters or letters and determinatives. These views are directly contrary to the conclusions of such scholars as Professor Sayce and M. Chabas ; and Mr. Hyde Clarke, in 1880, pointed out that the emblems must be syllabic, and the language probably Turanian. In fact, as the texts are older than 1400 B.C., it is highly improbable that the emblems would be alphabetic.

“ Professor Sayce, while pointing out that the Hittite language could not have been Semitic, has only gone as far as to suggest an approximation to Georgian. All that I claim to have done is to restore the known sounds of the symbols to the language to which they belong, to show that this was the Hittite language, and to put in the hands of specialists the key which will enable them to make final and complete translations of the texts. My knowledge of the language does not enable me to do more than this, and I ask those who are real authorities on this ancient tongue to show some indulgence for my probable mistakes, if they are satisfied (as I think they will be) of the soundness of my principles of decipherment.

“ The Memoir which I am preparing consists of the following sections :—

1. History of the Discovery.
 2. Rules for Translation.
 3. The Commoner Emblems.
 4. The Gods and Religious Ideas.
 5. The Grammar (General Remarks).
 6. The Cypriote Connection.
 7. The Cuneiform Connection.
 8. The Egyptian Connection.
 9. The Canaanite Connection.
 10. Other Connections.
 11. Summary.
- Analysis of 28 Inscriptions.
Final Note.
Vocabulary.

“ Five plates and some cuts of the symbols will be given ; but Dr. Wright’s ‘ Empire of the Hittites ’ will be required still by the reader for good copies of the inscriptions.”

The Memoir will take the form of a book in form and appearance similar to Captain Conder’s other works. It is now in the press, and will be ready very soon after Easter. Messrs. Bentley & Son are the publishers, and the price will be probably five shillings. As stated by Captain Conder, plates illustrating the

symbols are preparing for it. The work referred to by Captain Conder, Dr. Wright's "Empire of the Hittites," is published by Nisbet & Co. It contains all the inscriptions hitherto found in the Hamathite character carefully figured.

Herr Conrad Schick's researches on the Hill of Ophel promise to be of great value. He is going to follow up the research, of which an account is given on page 112.

Another large packet has been received from Herr Schumacher, with an important memoir and additions to the map. An analysis of this paper will appear in the July number.

The following letter appeared in the *Times* of March 30th. It is not yet certain whether permission can be obtained to photograph, plan, and figure the remarkable monument described. Steps have been taken to get the necessary authority, and we hope that before next July we may be in possession of a more accurate and complete description.

SIR,—I have just received through Dr. Henry Jessup, of Beyrout, the following letter regarding the discovery of a most interesting tomb temple at Sidon. Mr. Eddy's observations were made under great difficulties, and do not claim to be complete, but his hasty description will awaken widespread interest. Dr. Jessup adds that no inscriptions have yet been discovered, but Phœnician letters might easily escape notice during a hurried examination in bad light. Professors Porter and Fisher, of the Protestant Syrian College, Beyrout, have left for Sidon, with photographic apparatus and magnesium wire, in the hope of obtaining pictures of the sculptures. A Turkish guard is standing over the shaft to prevent the removal of the statues.

Dr. Jessup, writing later, adds:—"The west chamber is found to contain a marble sarcophagus, with painted figures (sculptures) in lavish profusion of the most exquisite designs—a very gem of Greek art."

The discovery at Sidon may turn out to be of very great importance artistically and archæologically. The treasure will probably be consigned to the archæological limbo at Constantinople. If they cannot be brought to London for the use of the world, could they not be preserved *in situ*?

I have the honour to be yours obediently,

W. WRIGHT, D.D.

British and Foreign Bible Society,

146, Queen Victoria Street, London, E.C., March 28th.

LETTER OF THE REV. W. K. EDDY, AMERICAN MISSIONARY, DATED SIDON, SYRIA, MARCH 12TH, 1887.

About a mile north-east of the city, in an open field above the line of the gardens, was found a shaft, open at the top, about 30 feet square and 35 feet or 40 feet deep. When this was excavated, doors were found on the four sides of the perpendicular walls leading to as many chambers. Entering the south one first, we found it about 15 feet square, cut out of the solid rock, roof and sides all of rock, but a built wall between it and court of shaft. Entering, two

sarcophagi met the eye, the one on the right of black marble highly polished, with lid of peaked shape, very little ornament; the one on the left of purest white marble of dazzling brilliancy and enormous size. Remembering that we saw these only by the flickering light of a candle, and in an atmosphere so dense with carbonic acid gas, that a candle held near the bottom went out, and that one soon became faint, it will be easy to see that guesses at measurements may be very faulty.

This sarcophagus was 11 feet long, 5 feet wide, and 12 feet high. The body was of one piece, and also the top of another solid block. The top was a grand arch of shining marble, the front of which was divided by a line into two panels, and so the back. At the four sides were four projections with noble lions' heads. On each panel was a symbolical figure, body of animal, head of eagle, with uplifted wings facing each other. Below, on the front of the tomb, beneath a very elaborate cornice, were two Centaurs facing each other and trampling on a warrior who strove to defend himself by a shield. On the sides, which were alike, were first two human figures with four spirited horses ahead of them; some of the horses have their heads turned back; and beneath the horses' feet a lion on the one side, and a boar or hyena on the other; then two more figures with four more horses.

At the back, in the upper part were also figures, bodies of birds, heads of men (if I remember aright), with beautifully extended wings. Below, two Centaurs carrying a captured stag between them. The cloaks falling from the shoulders of these Centaurs had lions' heads in the corners. One Centaur carries the branch of a tree like a gigantic arrow upon his shoulders. Below these figures all around was a band of figures quite small and exquisitely cut, representing hunting scenes, &c. This was partly covered with stones, so that we could not see it. The workmanship of this was good, but not remarkable. A hole had been broken in the front through which the contents had been rifled, but in general it was in a fine state of preservation. Three skeletons and five dogs' heads. From the long noses of the latter it is easy to infer they were hunting dogs.

The east chamber had also two sarcophagi, one small and plain, but on the left; while the larger one was on the right. This was the finest thing I remember to have seen in stone. A Greek temple, formed of finest marble, translucent as alabaster. The roof is slanting and carved to represent flat tiles, with strips of metal covering the joints, and pretty carved knobs where these strips cross the ridge. At the ends of the ridges are carved ornaments. The sides of the sarcophagus rise up above the eaves.

On the upper projections was a representation of the funeral procession, mourning women, two horses without saddles or trappings, but with men walking by them. A chariot with four horses—man in the chariot—then four more horses drawing the funeral car, more figures. In front three figures above and three on a strip below, all symbolizing grief. This top is all of one piece, and has the right upper corner broken open in order to rifle the tomb. The great beauty was the body of the temple, with a porch of columns all about it; and in the porch between these stood 18 statues, about 3 feet in height, not discoloured nor touched by dirt, as beautiful as if finished yesterday; of the finest art, muscles and form showed through the drapery. Each one of these eighteen would be a gem of itself—not a scratch nor a flaw anywhere. All the carving on this temple,

cornices, friezes, columns, &c., in perfect lines, as perfect and sharp as could be wished. Below is a band covered with representations of hunting scenes, &c. The imperfect view we could get of this was enough to fill us with enthusiasm. I cannot describe all the details—dragons, dogs' heads, mourners, &c.; thirty human figures above this band, &c.

North room, plain sarcophagus. West room has four sarcophagi which I have not yet seen.

I forgot to say that this temple has painted figures—cloaks, flowers, eyes with black pupils; paint mostly now gone. West room is said to be the finest of all.

The following additional particulars have been received by Dr. Wright:—

“The western door led into a small room from which we passed by a south-west door to another chamber, where there were four sarcophagi, three of white marble, and more or less ornamented with vines, &c. The large tomb is about 12 feet long, 5 wide, and 4 high to the eaves, and 2 feet to the side. This far exceeds all the other sarcophagi seen before. Professor Porter, of the American College, in Beyrout, says that he saw nothing to equal it in the collection at Athens, and very little in sculpture finer anywhere. The excellence consists in richness of ornament, force of the passions expressed, the variety of costumes depicted, the freshness of the painting of the costumes, the fineness of the polish, and great variety of subjects represented. The main features are battles. Two classes of warriors are represented: soldiers with casque helmets, tunics, short swords, some wore flowing cloaks painted red, but their tunics were blue, eyes also painted blue, these were mostly mounted on horses. The other class of soldiers had a peculiar head-dress, a peaked cap with tassels, and a cloth wrapped about the sides of the head, and also across the face below the nose; the rest of the costume was scanty.

“The upper part of the sarcophagus was loaded with ornaments. There were four beautiful lions on the corners. The tiles were not flat, but carved and also hollowed somewhat like caves. Had the tiles been flat the round edges would have suggested scales of fish. The line of the base of the slope had on it at intervals human heads with a surrounding of leaves, out of which they seemed to peer. Below, on the edge of the eaves was a row of stags' heads with horns. On the main body of the sarcophagus there was first a row filled with geometrical figures, below a receding cornice of cup and almond, or fruit of some kind; then a strip of exquisite vine tracery, with the background painted. Below, a fierce battle, with the dead and dying, horses rearing and plunging—a very spirited representation. On the other side a hunting scene: a hunter barbarian stands up with outstretched arms, having just discharged an arrow. A man on horseback as if thrusting with spear; then in front another horseman, and a lion has fastened upon the neck of his horse; the nostrils of the horse are dilated, and the skin is wrinkled above the nose. It is impossible to describe the many scenes depicted in this marvellous work of Greek sculpture.

“P.S.—A later note just received from Mr. Eddy states that the labourers are still excavating, and ‘now as they go deeper they uncover others, so that the total number is now sixteen. The last seven I have not been able to see, but all descriptions indicate that they are of Phœnician or Egyptian type.’”

The illustration serving for frontispiece is presented by Mr. William Simpson to the Committee. It is a reduced sketch taken from a large water-colour drawing, and will be exhibited at the Royal Institute of Water-Colour Painters in May next.

The "Memoirs of Twenty-One Years' Work" is now in its third thousand. *Subscribers are earnestly requested to use this book as a means of showing what the work has been, and what remains to be done.* Copies are given to every subscriber who wishes to have one, and additional copies can be procured at a great reduction in the price, *by subscribers only*, by writing to the central office.

The Palestine Pilgrims' Text Society propose to issue in the course of this year—

1. The Bordeaux Pilgrim (ready).
2. Areulfus de Locis Sanctis (in the press).
3. La Cité de Jherusalem (in the press).
4. The Travels of the Russian Abbot Daniel (under correction).

The works already issued are—

1. Antoninus Martyr.
2. Sancta Paula.
3. Procopius.
4. El Mukaddasi.

The subscription is one guinea. New members can have copies of works published in previous years at a reduced rate. Members are requested to forward their subscriptions to the Hon. Secretary without being reminded.

Will all the subscribers to the Palestine Fund remember—(1) that it helps the Committee very much if subscriptions are paid early in the year? (2) Next, that it saves a great deal of trouble if they are paid to Coutts & Co. direct by a Banker's order? and (3) That whenever they are due it saves a great deal of labour if they are paid without waiting for a reminder? The clerical staff of the Society is small, and it is greatly desired not to increase the management expenses, and not to overburden the work of the office.

The following books are now published uniform in size and appearance:—Conder's "Tent Work"; Conder's "Heth and Moab"; Schumacher's "Across the Jordan"; "The Memoirs of Twenty-One Years' Work." Conder's "Syrian Stone Lore" will also be added to the list. Subscribers can have the whole set, together with Hull's "Mount Seir," for 25s. carriage free.

The long-promised List of Old Testament Names is in the printer's hands. Mr. Armstrong has also prepared a new list of photographs arranged alphabetically according to those Bible names which are illustrated by photographs. This list is also in the printer's hands, and will be ready before the end of May. Those who wish for a copy of either may send in their names.

Mr. G. E. Stewardson, Assistant-Secretary of the British Association, has completed the great Index for the "Survey of Western Palestine." It is hoped

to get this ready very shortly. A circular on the subject will be sent to every one who possesses the great work of the Society.

The income of the Society, from December 12th, 1886, to March 30th, 1887, inclusive, was—from subscriptions and donations, £984 13s. 11d.; from all sources, £1,144 4s. 2d. The expenditure during the same period was £954 6s. 7d., viz.: on Exploration, £261 0s. 1d.; on Publications, £379 3s. 4d.; on Office, £114 3s. 2d.; and on Reduction of Debt, £200. The Balance Sheet for the year 1886 will be presented in the July *Quarterly Statement*. On March 30th the balance in the Banks was £385 15s.

Subscribers who do not receive the *Quarterly Statement* regularly, are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

The only authorised lecturers for the Society are—

- (1) The Rev. Henry Geary, Vicar of St. Thomas's, Portman Square. His lectures are on the following subjects:—
 The Survey of Western Palestine, as illustrating Bible History.
 Palestine East of the Jordan.
 The Jerusalem Excavations.
 A Restoration of Ancient Jerusalem. Illustrated by original photographs shown as “dissolving views.”
 - (2) The Rev. James King, Vicar of St. Mary's, Berwick. His subjects are as follows:—
 The Survey of Western Palestine.
 Jerusalem.
 The Hittites.
 The Moabite Stone and other monuments.
 - (3) The Rev. James Neil, formerly Incumbent of Christ Church, Jerusalem.
 - (4) The Rev. George St. Clair, Bristol Road, Birmingham, has resumed his Lectures for the Society. He is at present in the Holy Land, but is expected to return about the middle of April, when he will be ready to make engagements either for the summer or the autumn.
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ERRATUM.

In January *Quarterly Statement*, page 47, the plan of the Mosque el Aksa should have been described as “according to Mukaddasi,” while that on page 49 should have been described as the “Mosque el Aksa as it is.”

THE SAKHRAH.

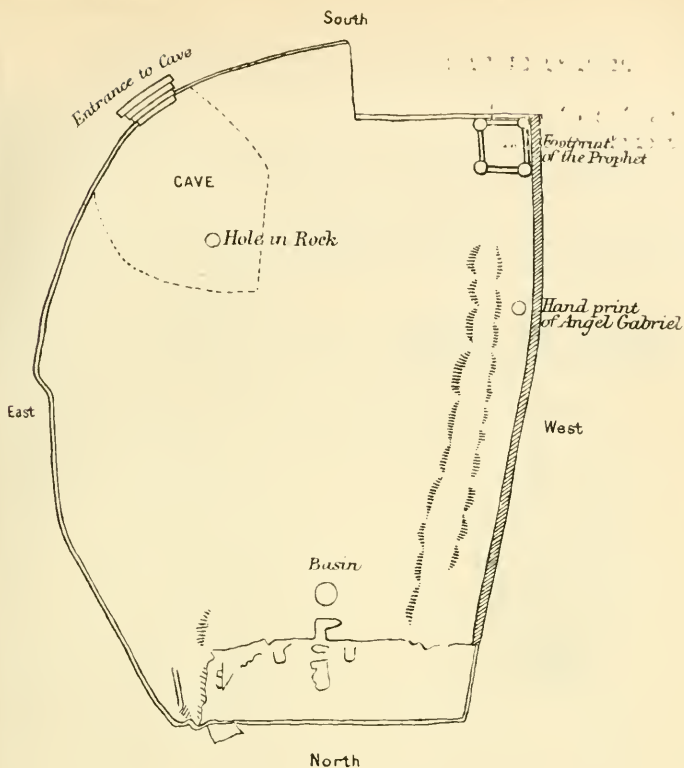
THE view is taken from the north-west corner, and has not been done from that point of view before. This shows the western side of the rock, and from its appearance it may be supposed to have been hewn all along at some time or another. There are towards this side, on upper part of the rock, some parallel ridges, where are also signs of the use of a tool. As these are rather the worse for time, it might be assumed that the cuttings belong to a long past date. Another peculiar feature which is visible in this illustration of the rock, is a hollowed-out basin on the upper surface near the north end. Immediately in front of this there is a recess cut out of the rock, evidently intended for the person officiating to approach the basin. In front of this are two or three slabs of stone, which seem as if intended for a paved way by which to enter the recess. It will be noticed that most of the north side of the rock has also been scarped with tools.

Some say that the basin was used for slaying the sacrifices in at the period of the Temple Service, and that the blood flowed from that spot to the hole through the rock to the cave; but this seems altogether incredible. In the first place, the blood could not possibly have passed over such a great distance with so many irregularities on the surface of the rock; and in the second, the theory that the animals were killed here does not agree with what we know of the Temple rites.

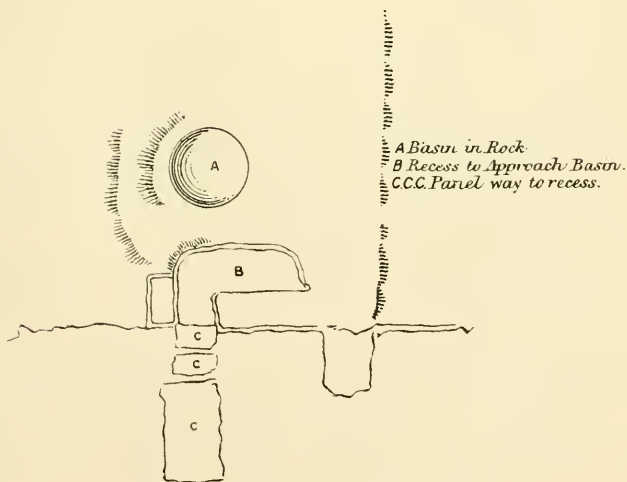
The drawing and plans have been presented to the Society by the artist, Mr. William Simpson. The finished painting, from which the drawing is taken, will be exhibited at the Royal Institute of Water-Colours in May.



THE SAKHRAH, OR SUMMIT OF MOUNT MORIAH, JERUSALEM.



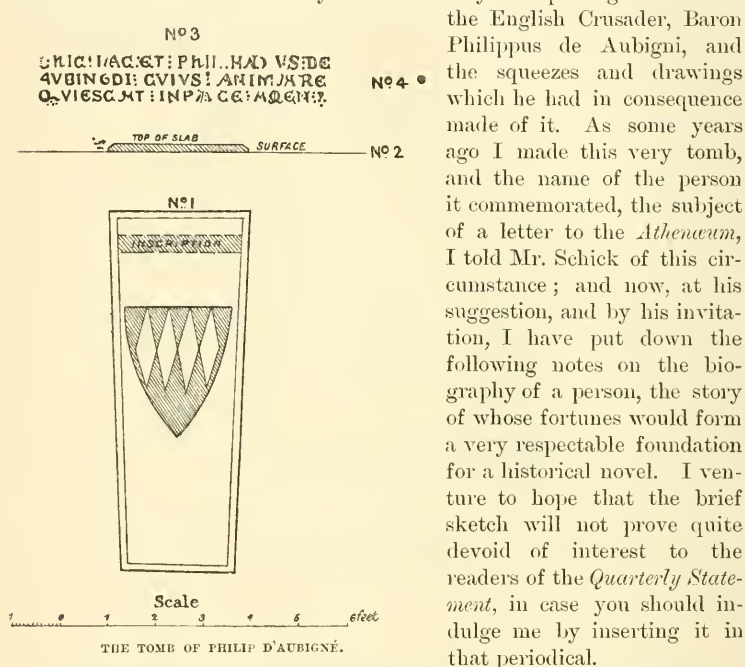
THE SAKHRAH.
SKETCH PLAN



SKETCH PLAN
SHEWING BASIN IN ROCK, AND THE APPROACH TO IT

THE TOMB OF PHILIP D'AUBIGNÉ AT JERUSALEM.

HAPPENING some days ago to call on Mr. Schick, he very kindly showed me the communications he lately received from you respecting the tomb of



the English Crusader, Baron Philippus de Aubigni, and the squeezes and drawings which he had in consequence made of it. As some years ago I made this very tomb, and the name of the person it commemorated, the subject of a letter to the *Athenæum*, I told Mr. Schick of this circumstance; and now, at his suggestion, and by his invitation, I have put down the following notes on the biography of a person, the story of whose fortunes would form a very respectable foundation for a historical novel. I venture to hope that the brief sketch will not prove quite devoid of interest to the readers of the *Quarterly Statement*, in case you should indulge me by inserting it in that periodical.

The name of de Albineto, de Albineio, de Albenio, de Albinio, de Albinei, de Albinie, de Albini, de Albeni (de Ableni), d'Albigni, d'Aubigni, de Aubigni, d'Aubeny, d'Aubenie, d'Aubeny, d'Aubeny, d'Aubinay (for, like many other mediæval and Norman family names, we find it spelt in various ways before it arrives at the form now in vogue, viz., Daubeney), is of frequent occurrence in the pages of old chroniclers.

The first five of the above forms are all found in the "*Historia Major*" of Matthew Paris (edition of W. Watts; printed by Hodgkinson, London, 1640).

Taking this work as our guide, we learn that a Richard de Albineio, who died in 1119, in the reign of Henry I, was Abbot of St. Albans.

In 1139, that is, twenty years later, a William de Albineto was castellaine of Arundel Castle at the time that the Dowager Queen Adelais received the Empress Matilda and her brother, Robert of Gloucester, as guests into the said castle. Later on, in 1215, amongst the names of the

nobles who wrested from John Lackland the celebrated Great Charter of Runnymede, that of Philippus de Albeneio (p. 255) or Philippus de Ableni, probably a misprint for de Albeni (p. 262), occurs, and later historical notices seem to indicate that the tombstone in question marks his grave. The events of the reign of John are, I presume, familiar to every English school-child; it will therefore suffice if I remark, that as he never intended to abide by the terms of the Great Charter he hired a body of foreign mercenaries, and began a war against the barons by laying siege to Rochester Castle, which he captured, in spite of the gallantry of its defenders under Baron William de Albineto, styled by the old historian "vir nobilis et per omnia laudabilis strenuus et in rebus bellicis expertus." As for the garrison, he killed those among them who were of the highest rank, amongst whom were William and Odinevellus de Albineto. During his desolating march northwards, Philippus de Albeneio=Albeneto was with others compelled to accompany him (p. 274). The castle of Belvers=(Belvedere)=Belvoir=Beauvoir fell into the tyrant's hands, its keys being surrendered by Nicolas de Albineto, son of William, who hoped by so doing to save the life of his captive father (p. 275). After the death of John, Philippus de Albeneio was present at the coronation of his son, Henry III of Winchester, a child of eight years of age, whose training was entrusted to his care during the protectorship of the able Earl of Pembroke. He was likewise present at the relief of Lincoln, and the decisive battle in May, 1217 (pp. 289, 295, 298). The Earl of Pembroke died in 1219, and in 1222 Baron (p. 295) Philippus de Albeneio="the English crusading Knight, Philip d'Aubenei (see footnote to page 155 of the reprint of the article "Crusades," by the late Major Proctor, R.E., in the *Encyclopedia Metropolitana*, Richard Griffin & Co., London and Glasgow, 1854), the valiant soldier of honourable and commendable manners, the most faithful teacher and tutor of the King of England, "miles strenuus, ac morum honestate commendabilis, Regisque Anglorum magister et eruditor fidelissimus" (p. 313), having resigned his office of Royal tutor (the King was in the following year declared of age to govern for himself), took his sword and lance and his trusty Norman shield, with its escutcheon of four fusils, and joined one of the expeditions accessory to the Fifth Crusade.

A letter of his to his old friend and brother in arms, Ralph, Earl of Chester and Lincoln, who had taken the Cross at the commencement of the Crusade, but who had returned to England after the capture of Damietta in 1218 (p. 303), is still extant (p. 313). In this letter he tells how, after leaving Marseilles, the band of Crusaders approached Damietta, but were met by many vessels leaving that port in consequence of the disastrous issue of the campaign led by the Papal Legate, which resulted in the evacuation of Damietta. These tidings were, of course, grievous to the pious soldier and his comrades. "Quando vero hos rumores audivimus magnum dolorem habuimus, sicut omnes Christiani habere debent." After due deliberation it was resolved to steer for Acre, which was reached in due time. During his residence of fourteen years (1222-1236) in Palestine

he appears to have taken an active part in the stirring events of that period, and he lived to see what many another gallant Crusader, "*cujus anima requiescat in pace*," was not destined to witness, viz., the undisturbed possession by the Christians, in consequence of the remarkable treaty of Frederic II, of Bethlehem and Nazareth, with free access to Jerusalem and the holy sites.

Here I must conclude my notice of him (in hope that others will fill in the outline thus briefly sketched) with the following extract from the chronicle already named, and referring to events happening just before the expulsion of the Christians from Jerusalem by the Sultan of Egypt in 1236 :—"Circa illos dies, nobilis ac Deo devotus in armis strenuus miles, Philippus de Albeneto, postquam militaverat Deo in *Terra sancta*, peregrinando pluriès, tandem in eadem, diem Claudens extremum, et finem faciens laudabilem, sanctam meruit in *Terra sancta*, quod vivus diu desideraverat, sepulturam" (p. 432).

It seems a strange coincidence that of the two Crusaders' tombs which till a year or two year ago were still *in situ* at Jerusalem, one, which has now disappeared, should, on good historical evidence, have been identified with that of one of the murderers of Thomas à Becket, and the other, still in position and in excellent preservation, that of a soldier and scholar who helped to secure England's Great Charter.

The mediæval tombstone dug up thirteen years ago by Mr. Maudslay is now in the collection of antiquities at the Church of St. Anne.

J. E. HANAEUR.

JERUSALEM,

January 31st, 1887.

RESEARCHES IN THE PLAIN NORTH OF CÆSAREA.

By G. SCHUMACHER.

(I.) AN EXCURSION TO THE CROCODILE RIVER.

WITH the object of hunting up one of those famous crocodiles which are said to be found in the swamps of the Nahr ez Zerka, the Crocodile River of the ancients, near Cæsarea, a specimen of which was killed by the German Colonists in the spring of 1878, and invited by the natives of that district to destroy these enemies, who annually look for a prey out of their flocks and herds, I gathered a few friends of the Colony and camped for a week near the marshes of the said river.

After inquiring about the customary haunt of the crocodiles—a question which was warmly discussed among the members of the Ghawârnî tribe of

the swamps—I chose eight out of the best hunters of them, and, accompanied by six colonists, we began to make our way into the swamps. Our guides were each armed with a primitive rifle, pistols, and knives, bare-footed, and clothed with a long shirt which they tucked up to their knees and fastened in their leather girtle; their figures were stout, tall, and not unpleasant, their colour pretty dark. Although Moslems by religion, they do not hesitate to hunt, kill, and eat wild boar if they are not able to sell it on the spot to natives going to Haifa. They live amidst the swamps in poor-looking hair-tents, among cane jungles and water pools; they cultivate no soil, but live on buffalo (*jammās*) milk and cheese, and on the results of their hunting. The climate of their home is much feared for the malaria fever, which is produced by the stagnant waters of the Zerka together with the burning sun, and even a night suffices for a stranger to suffer from it for months; but the Ghawârnî—*i.e.*, “the inhabitants of the Ghôr, or Zôr,” “the depression,” in which they camp—enjoy these regions to such a degree that an Arab proverb says, “if the Ghôry leaves his marshy camp and comes to Haifa, he gets attacked from fever, for a healthy climate injures his health.” If on such an occasion the Ghôry comes back in a feverish condition, he unties his shirt and keffiyeh (head-cloth) and wallows in the abundant mud of his vicinity; he then looks for a good dry and hot place, where the sunbeams can reach him without obstacle, stretches himself out and does a good sleep. When he awakes, the mud covering his body has dried up, and when it falls in pieces from him, the Ghôry feels released from his illness. Primitive as this cure may sound, it nevertheless proves to be successful, for the mud-cover withdraws the heat from the body.

The Ghawârnî of the Zerka are not numerous; they live among themselves in good peace, but they are feared by the neighbouring fellahîn and Bedouins for their rapacity and boldness, of which many stories can be heard; they are also not considered to be Moslems, as they do not observe the Mohammedan interdictions as to pork, spirits, and dogs, the latter being their continuous companions.

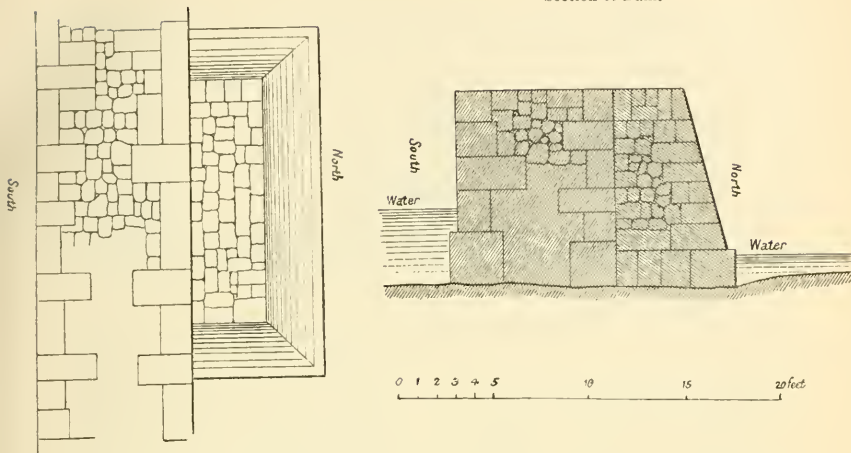
Our Ghawârnî took us first to the Khurbet Kubbâr (خربة كُبَّار) marked “Kebârah” on Sheet VII of the large map of the Fund), and from thence in a south-western direction about 800 yards further to the swamps. We had chosen this late season of the year, in order to find the marshes reduced to their minimum; but, nevertheless, we find, were enough of them yet. Our guides now took us through canes 10 and 15 feet high, and ’Ulleik (raspberry) jungles, through which they broke paths for us, now and then passing small ditches into which we sank up to our knees and body, sliding over wet plantations of wild celery, which in these regions is abundant, or being caught by the sharp thorns of the raspberry bushes, which tore our clothes into pieces. After struggling in this way along for some hundred yards we finally arrived at a small lake of about 150 by 80 yards of clear, good water, the shores overgrown by high jungles of cane, the so-called Birket Timsâh, or “Crocodile Pool.”

This Birket was pointed out to be the regular hiding-place of the beasts, and in fact we remarked certain flat pieces of ground on the shore on which the cane was trodden down, with traces of such animals. "Here they rest and expose themselves to the sunbeams about noontime," our guides exclaimed; but, although we retired and watched in the jungle for hours, we could not discover any such animal. Ducks and water-fowls quietly crossed the pool, and crowds of white fish played in the clear water. Half a goat was now fastened to a strong hook, and with an iron chain fastened to the shore, and this bait thrown into the pool; next morning, when we returned again, the bait was gone, but nothing caught. At our second arrival at the pool a crocodile was seen for a moment near the shore, but disappeared immediately, and never was discovered again. In order to hunt it up in the Birket itself, a boat would be required, with the aid of which the beast could easily be discovered in the clear water. All our efforts to this effect were without result. Our guides took us southwards along muddy lakes and marshy arms of the Zerka River, across which they carried us on their shoulders, often sinking in to their neck, and it was with a very mean-looking exterior that we arrived at the actual river, the vicinity and shores of which were thickly covered with low brushes of "*tarfu*," or tamarisks. We proceeded to several pools, crawling on our hands and feet in the mud below the tamarisk jungles in order to discover a crocodile; but, with the exception of fine specimens of wild boar and francolin, which we shot, no other animal worth mentioning was seen. Late in the evening we arrived at the mills, "*tawakhn Jisr ez Zerka*," at the bridge near the mouth of the river. The next morning we started in a northern direction, and explored in the same way the marshy region situate between Khurbet Kubbâra and the Tahîmet esh Sheikh, a mill on the Nahr ed Dufley, so called while lying near the tomb of a Mohammedan Saint; but also these researches were resultless.

The marshes on this part of the Zôr were very much reduced, and the dam across them could be more thoroughly explored than in March, when the Palestine Surveying Party visited that region (see "Memoirs," Vol. II, p. 29, Kebârah). This ancient and very strongly built dam had, as already mentioned in the "Memoirs," the object of preventing the spreading northwards of the marsh surrounding it in the south; the natives call it *Jisr el Kanâ*, جسر القناد, "the Bridge of the Aqueduct," but no convincing signs of an aqueduct could be discovered. The dam is built up with large sandstones, from 3 to 6 feet in length, the height of its layers being from 16 to 28 inches, combined by good white mortar, and laid alternately as headers and stretchers. The width of the dam near its eastern end is but 3 feet, but it soon widens to a width of 8 feet 3 inches; its height varies according to the terrain from 2 to 11 feet. At such parts where the dam has the height of 8 to 11 feet, buttresses were added to the northern side, having a width of 13 feet, and projecting 3 feet 6 inches, with a slope towards its base.

The total length of this dam was about 1,400 yards. Near the middle,

Section of Dam.

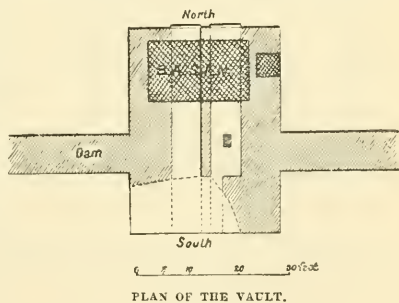


DAM ACROSS SWAMP OF THE NAHR ED DUFLEY.

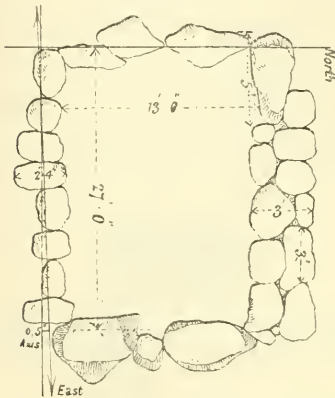
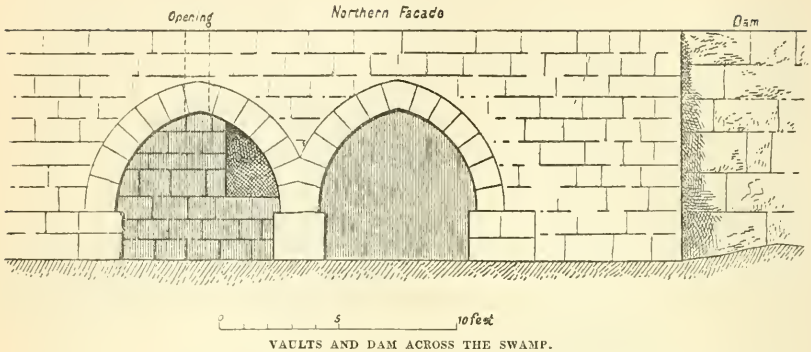
where the dam has its maximum height of 11 and more feet, its surface widens, and two pointed vaults were discovered. Although this part is very much fallen, the following plans could anyhow be made, which would prove that these two openings were prepared for the purpose of giving an outlet to the waters in case they should surpass their ordinary maximum height. The vaults are 6 feet 6 inches wide, and about 6 feet 3 inches high, with signs of plastering. On the southern front, across the vaults, a wall with a small rectangular opening was added later, evidently because the vaults being found too large to answer their purpose. The dam, which has on this spot a width of 43 feet, shows on its surface remains of rectangular plastered basins, and an opening into the vaults 12 inches by 16 inches; there are also traces of a pavement to be discovered. The dam may therefore have served in the meantime as a passage, and the mentioned basins may have been watering-places for the animals.

The marshes and lagoons approach to both sides of the dam in winter, and never dry up entirely; in their mud numerous herds of buffalo oxen wallow.

From the dam we returned to our camp near Khurbet en Nazle (Sheet VIII), a ruin with scattered large building stones and caves. Between this ruin and Khurbet el Ehdeithyeh (Sheet VIII), on the main road, a



PLAN OF THE VAULT.

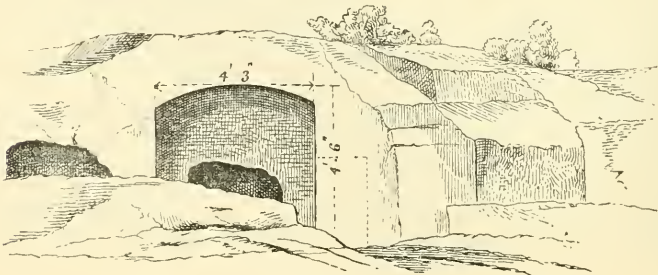
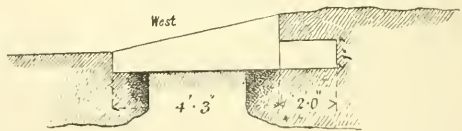


rectangular room surrounded by large unhewn limestones, evidently an ancient burial-place, was discovered. The bearing of main axis was exactly from east to west (east 180° , west 5°); the eastern and the western ends are marked out by uncommonly large stones, 5 and 3 feet long, 2 and 3 feet high, the length of the grave being 27 feet, its breadth 13 feet.

A little east of Kh. el Hadeithiyyeh, on the foot of the Carmel ranges, I opened several caves, the openings of which

were partly filled up with rubbish, partly overgrown with *Serris*. An exploration of the interior proved that these openings all belong to one very extensive cave, whose artificially worked main entrance faced the

SECTION OF ENTRANCE



CAVE EAST OF KH. EL HADEITHIYYEH.

ruin towards west. The interior is in a totally fallen state, and filled up with fragments of a rock-hewn ceiling, rubbish, and mud; near the floor signs of a *loculus* can be discovered; the rock, being a soft *Nâri* limestone, crumbles rapidly. The western main entrance shows a rock-cut arched gateway, 4 feet 3 inches wide, and yet 4 feet 6 inches high, with a sided bay to the right, into which a slab was placed in order to close the cave.

On the ruin itself nothing but traces of well-built walls and one column-shaft could be found; it is intended to build some huts on this site, which now belongs to the Jewish Colony at Zimmarîn.

From our camp we proceeded southwards down to the Burj en Nisr the "Eagles Rock," a precipice below Khirbet Mansûr el 'Akab (Sheet VII), the extreme south-western end of Mount Carmel, renowned for the great number of eagles, nestling in the natural caves of the rock; and from here to the Tahmet Abu Nûr, a mill built on the Nahr ez Zerka, and followed the course of the river down to its mouth nearly; but our researches as to crocodiles were without result: all we came across were ditches, swamps, and jungles of tamarisks. I therefore hesitate to believe, as generally said, that these creatures are numerous in the marshes of the Zerka, and although their existence cannot be denied, their number must have been reduced to a couple or so.

From the mill above mentioned we followed the river upwards to Miyamâs. The description of its theatre can be found in the "Memoirs," Vol. II, pp. 66, 67; the ancient site, as well as the theatre, is now built over by a fine grain-store belonging to a rich merchant of Haifa, and next to it a village of twenty huts has been erected. The ground near, marshy in winter, has been drained and cultivated, and the gardens of el 'Ayûn replanted with fruit trees. The theatre has been partly broken down and the building stones used elsewhere; the interior vaults are prepared to serve as barns and stores; the "arena" forms the courtyard of the place, where its master receives the tenths, and judges over his fellahîn. Near the gardens large white marble columns were excavated, and several ancient tombs opened; each of these tombs had a large stone cover; the grave itself was sunk into the ground and built up with masonry.

The spelling of the name of this ancient site is, according to my collection from several sources, *Miyamâs*, ميماس, not *Mâ-mâs*, مئاماس, as given in the Name Lists of the Palestine Map (Vol. Name Lists, page 151), and would in this corrected spelling resemble the Jewish "*Majumas*" still more.

Not only this ruin has been settled since the Palestine Map was edited, but also the following old sites situate in its neighbourhood (marked "Ruins" on the map):—

2. *Zimmarîn* (Jews) 130 houses, built in European style.
3. *Ez Zerghanîyeh* 20 huts and a large granary.
4. *El Bureij* 30 huts (a flourishing village, with a mosque, a fine granary, dwelling and garden of el Haj Amin Agha).

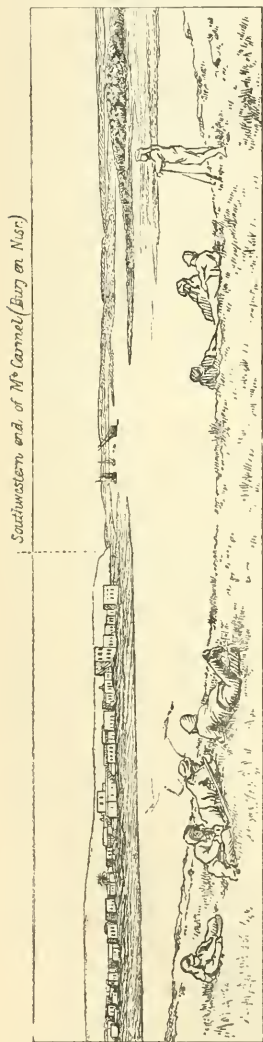
5. *Burj el Kheil* 12 huts, moderate village.
6. *Umm el 'Alak* 18 huts, well-built houses and granary.
7. *Kaisàrieh* (Cæsarea) 22 well-built houses with tile roofs; Bosniaks.

The soil around the Nahr ez Zerka is most fertile, but the climate very feverish. A few years ago wealthy people of Haifa and Acca had taken possession of these lands and began to drain the marshy region with the aid of experienced farmers, and to cultivate the soil with European agricultural implements. Should they continue to purify this region in the manner they have thus commenced, I have no doubt that this spot, for its abundance of good water and soil, will soon be the most thickly settled one in this part of Palestine.

From the Zerka River we took our way homewards again by the way of Tantûra (Sheet VII, "Memoirs," Vol. II, page 7). This village is still increasing, and good-looking granaries rise near the seashore, whence grain is exported in small sailing vessels, generally to Esh Shûny near Beirût; the vessels anchor between the isles and the shores. But the more the village grows, the more the ancient remains disappear from near the isolated old tower to the north of Tantûra ("Memoirs," Vol. II, p. 7). The large blocks formerly built into the city wall near the shore are taken one by one away to Jaffa and other places.

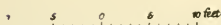
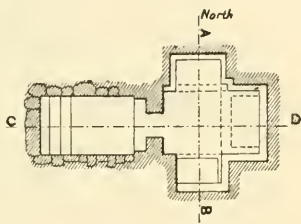
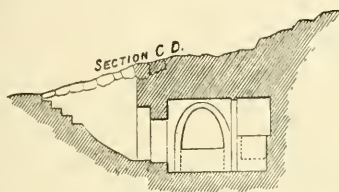
Our road led us further on to Kefr Lâm and to Sheikh Abrâk, also called Khurbet Malhâh on Sheet V and "Memoirs," Vol. I, page 314; the latter name, *Malhah*, which I could not learn from the natives myself, who merely call the ruin Khurbet esh Sheikh Abrâk, may possibly be derived from the fact that the ancient sarcophagi and holes in the rocks near it are used to a wide extent as salt basins, that is, into which sea-water is poured in order to obtain cooking salt by the evaporation of the water by the sun; this trade is practised all along the coast, and such places generally bear the name *Mallâha*.

The various characters of ancient tombs found at this site are noted in the "Memoirs," Vol. I, page 315, but it seems uncertain whether the cave,

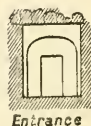
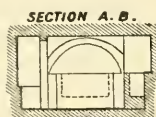


TANTURAH, LOOKING SOUTH, SHOWING THE ISLANDS AND PORT.

the entrance of which I opened, has already been explored ; this cave has the distinct form of a cross, and is reached by a stairway and a rectangular entrance under an arch cut out of the rock. No signs of a stone gate exist.



The tomb itself measures 12 feet 8 inches from north to south, and 10 feet 3 inches from east to west, the main axis being oriented from east to west. The interior is worked as a cross-vault ; under each of the three arcosolia we find a loculus, elevated 3 feet 8 inches above the ground, the total height of the cave being 7 feet 6 inches.

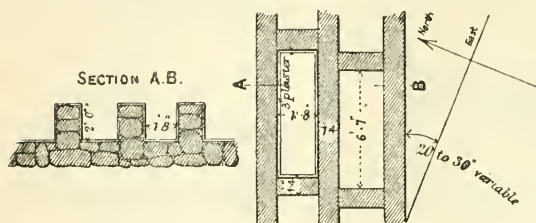


From Khurbet esh Sheikh Ibrâk we still proceeded northwards towards 'Atplit, and before reaching this town I discovered, some 800 yards south of it (near Bîr el Yezek), the tracing of a very strong wall, built up with mighty unhewn stones, running from east to west across the range of low hills separating the Zôr of 'Atplit from the actual plain ; this wall may have formed part of the outworks of the fortress. Strolling along these hills, between the Bîr and the rock-cut passage of 'Atplit, I struck upon a fallen dolmen, situated on the shoulder of them ; the side-stones were still in good order, but the top-piece fallen down. 'Atplit itself is, as before, a poor-looking, miserable village, with scarcely any recent progress to be observed ; some 50,000 of the ancient large building stones of the cathedral and fortress were sold lately by the Government of Haifa to that of Jaffa, in order to build a Quay and custom-house at that port.

(II.) TIBERIAS AND ITS VICINITY.

The construction of carriage roads in the Liva of 'Acca now and then leads to interesting discoveries. One of these roads was commenced at the western gate of Tiberias, taking a western course up the mountain, and in cutting through an elevation near the gate, an extensive, very ancient Jewish cemetery, was discovered, which could be followed up to a distance of about 600 yards from the gate. The graves were some 2 or 3 feet below the ground, one built close to the other, in rows of three and more, and only separated by a wall of 1 foot 4 inches : the width of each grave was 1 foot 8 inches, its length up to 7 feet, and its depth generally 2 feet.

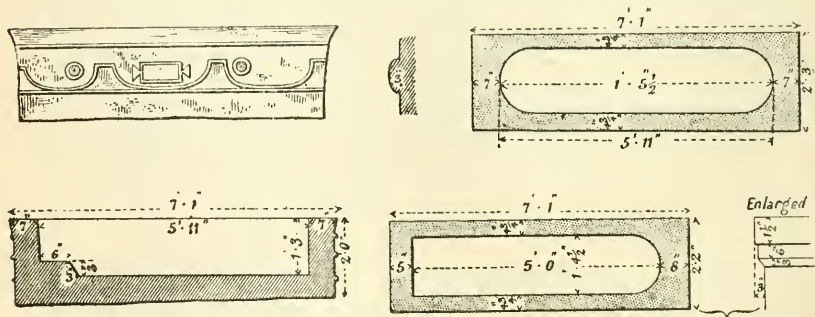
The building material was composed of hewn and unhewn basaltic stones, and a white, good mortar ; the interior of the grave was plastered.



graves were also found within the present city wall. Large slabs lying about prove that they formed the cover of the graves. Next to these rows of graves, which evidently belonged

to a poorer class of people, handsome *sarcophagi* were found, cut out of a limestone of white colour, the rock of which exists near the hot baths. They were lying in disorder about, 1 to 3 feet below the surface, covered by large basaltic and limestone slabs ; a regular orientation could not be made out, but most of them faced the east with the head end. Their length varies from 4 feet 3 inches to 7 feet 1 inch, their width from 2 feet to 2 feet 4 inches, their height from 2 feet to 2 feet 3 inches. The head end shows in its interior a cushion, and is generally round, while the foot end is square ; on some, both ends are rounded. The long sides of the sarcophagus now and then show a relief ornament with a tablet, but no inscription ; the ornament is elevated but 3 inches, and quite primitive. Top and foot are distinguished by a simple moulding.

Some of these sarcophagi were taken to the Serail in order to be preserved, others were broken to pieces.



SARCOPHAGI FOUND AT TIBERIAS.

The ornaments of these sarcophagi, as well as their entire arrangement, are very closely similar to those which I found at Kala'at el Husn, on the other side of Lake Tiberias, the supposed Gamala of Josephus (see Schumacher, "Der Djaulân," 1886, Leipzig).

In walking one evening along the new road at Tiberias up the slopes of the hills, I was struck by the sharp and regular shadows which were thrown by a part of the summit of the Herod Mountain, or Kasr Bint el

Melek, which rises between the hot baths and the city, and which by this illumining of the sinking sun clearly indicated the outlines of a rampart running around the summit of the mountain. As, on my return home, I found only a very brief account of this site in the "Memoirs" (Vol. I, p. 412), I again proceeded to the place and followed the ancient traces of the wall up, which I hereby reproduce, together with a sketch of the adjacent slopes.

This wall of Kasr Bint el Melek, the supposed mountain of Herod, surrounds, as before said, the upper part of a steep and bold hill, the lower and eastern part of which is formed by inaccessible rocks, into which numerous caves are worked, partly by nature, partly by men. In the south, where the rocks contract into a narrow shoulder, the mountain is bordered by a wâdy, and a path leads up along it in numerous serpentine to the plateau; also on the north a road runs along the slopes of the mountain, which are also bordered by a wâdy. Both watercourses rise very near each other. At one point in the west there is but a narrow neck between; this neck widens towards the east, and becomes a kind of plateau from which rises the summit of the hill, which still shows a large amount of ancient building stones, evidently the most important point of the site. From this summit the mountain rapidly falls off towards east, south, and north, and a wâdy divides the slope, surrounded by the wall, into two halves. The Kasr, therefore, was only accessible from its western and southern slopes, while the other portions were defended by high cliffs. The rocks are limestone.

Coming from the western gate of the city of Tiberias, the ancient city wall can be followed up to the cliffs of the mountain above described. Above the cliffs traces of a well-built wall, 60 yards long, run up the steep slope to a point where it unites with the actual fortification wall of the Kasr. Here the remains show a wall 8 feet 6 inches thick, built up with small basalt building-stones, 1 and 2 feet square, set in a good white mortar, but which now begins to decay rapidly. Portions of the wall rolled down into the wâdy bed, detached by the earthquake of 1837. The construction of the wall is exactly the same as that of the remains found between the city and the hot baths, along the shore of the lake. The wall now runs into two directions, eastwards and westwards, round the summit; in its western course arriving at the described neck, where the plateau is easily accessible, it ends in a square tower of 23 feet, now fallen to a height of a few yards above the terrain, of the same construction as the wall, and bends nearly in a rectangle southwards and south-eastwards, showing along its course another square tower; from here the slopes begin to become steep to the right and left; falling off into wâdies, the wall diminishes into a width of 6 feet 6 inches and less, and winds round the natural construction of the mount until it joins the other half, which in a similar way followed the eastern and north-eastern slopes. The western and southern wall yet stands, generally to a height of a foot or two, and can therefore be easily followed. The eastern and north-eastern wall is totally ruined, and scarcely the traces can yet be discovered; this portion, standing just above

the cliffs, was less strong, and built up with evident little care. From where the actual fortress wall closes, a line still continues winding down finally to the plain, and then to the lake shore, where it unites the wall bordering the lake. Reading the above description over again, I find that I must add that the actual large city wall began at a point near the present town in the west, followed the foot of the mountain up to the cliffs of Kasr Bint el Melek, and then from there winded westwards round the projecting hill, embracing thus one of the most conspicuous points of the vicinity, and, running down its southern slopes again, joined at the lake shore that portion of the city wall which followed the shore up to the present town. The conspicuous mount itself, rising to a maximum height of about 580 feet above the Lake of Tiberias, received its own surrounding wall and castle, and thus by its fortified and elevated position formed the Acropolis of the city. The length of this city wall, in all, would be about three English miles; that embracing the Kasr Bint el Melek alone, 1,040 yards. Within the wall of the latter but few ruins were found. The most important one, now merely a large heap of hewn stones, and some basalt columns, occupies the highest point of the mountain; the few traces found cannot lead to any plan of the former building. On the western foot of this elevated ruin we remark a square subterranean building, 26 feet by 23 feet, with remains of plastering and a projecting pillar, probably of a former vault; the interior of this basin is filled up with *débris*. Little to the south of it a circular basin, measuring 4 feet 9 inches in diameter, and yet 6 feet deep, was found. The interior is also plastered, the building work circumfering the basin is of good masonry; on its surface several worked channels lead into the direction of the described neighbouring square building. Both basins may have been used for water supply. Walking still along the wall until the middle tower of the south is reached, a third square building, 49 feet by 23 feet, occupies the borders of a small plateau; its masonry work is strong, the walls having a thickness of several feet. In the interior of the Acropolis wall no other remains of interest were found. Portions of masonry work, broken column-shafts of basalt, and building stones lie in heaps in the wâdy bed; but no ornament whatever could be discovered to give an idea of its building area. But there is no doubt that the whole terrain, being included by the wall, was never covered with buildings, and that the few single that have been erected manifest a fortified character and position. Kasr Bint el Melek, therefore, was no city, but, as its name gives, a fortress, probably Herod's castle, destroyed by Josephus.

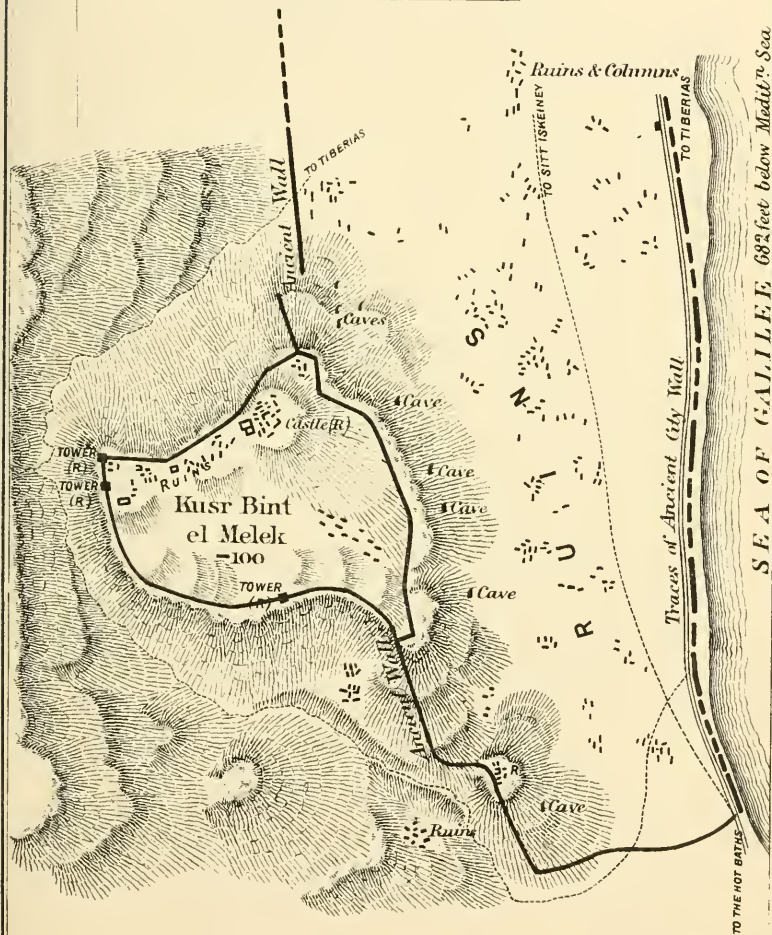
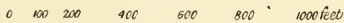
In passing outside of the Acropolis wall to the south, the general city wall serpentines along a thin neck, separating two wâdies; at this point another subterranean square basin, and near by traces of a building were remarked.

At the eastern foot of the Kasr the most remarkable ruins of the ancient city are found, among which the recently restored and greatly venerated Mohammedan sanctuary of the Sitt Iskeiney rises. It may be hoped that in constructing the new road across this field of ancient

OR MOUNTAIN OF HEROD.

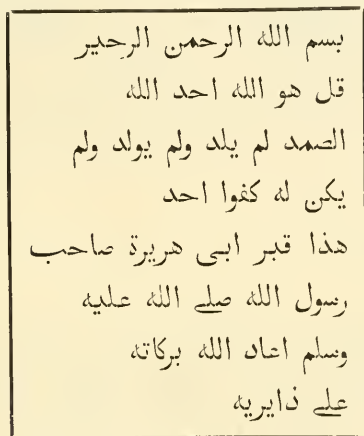
By G. Schumacher.

Scale

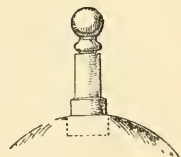


remains, between Tiberias and the baths, most interesting discoveries will appear.

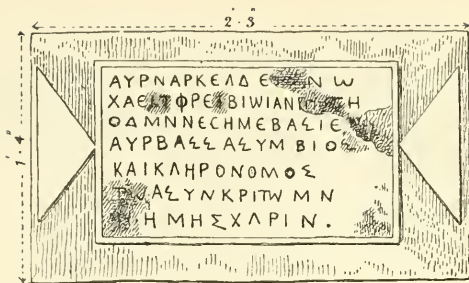
While taking a walk through the city—the exact population list of which will be prepared for my next report—I remarked several old stones excavated in the vicinity of Tiberias ; one of them I found in the yard of the *Reis el Belediyeh* (city major), whence it was excavated, which bears the following interesting Arabic inscription :—



The stone is of 'Ajlûn marble, and measures 2 feet 7 inches by 2 feet. This inscription, which renders that it designated the grave of *Abu Hureira*, "the friend of God's disciple," was found interesting enough to be sent to the 'Ulema (Mohammedan learned men) of Damascus, and to inquire how this is to be understood; for, according to Mohammedan tradition, Abu Hureira died and was buried at *Medina*. The 'Ulema briefly replied that the inscription was erroneous and false; but the Mohammedan *Mufdi*, or priest of Tiberias, was not contented therewith, and sent a copy to Constantinople. Should the inscription be trustworthy, and could it on the hand of the history be authenticated, Tiberias would soon become the character of a great Mohammedan place of pilgrimage. It would be very interesting to make historical researches thereon, which I here, in the absence of any library, am not able to do. I carefully investigated the place where the stone was found, and discovered infallible signs of an ancient mosque, as the prayer niche in a southern ancient wall, an opening to the north, parts of a cupola, and the top-stone or crown which usually ornaments the *Jâma'* vault. I should gladly wish Tiberias a better link than it hitherto had, for it is in great want of a flight.



Another stone, basalt, which, according to what I was told, has been excavated near the western gate, bears the following Greek inscription :—



A third stone, a marble column with a Hebrew inscription, has been excavated near the southern Jewish cemetery, but the inscription proved to be modern.

G. SCHUMACHER.

HAIFA, November, 1886.

NOTICES OF THE DOME OF THE ROCK AND OF THE CHURCH OF THE SEPULCHRE BY ARAB HISTORIANS PRIOR TO THE FIRST CRUSADE.

TRANSLATED BY GUY LE STRANGE.

*"No Mohammedan writer of any sort, anterior to the recovery of the city from the Christians by Saladin, ventures to assert that his countrymen built the Dome of the Rock."*¹

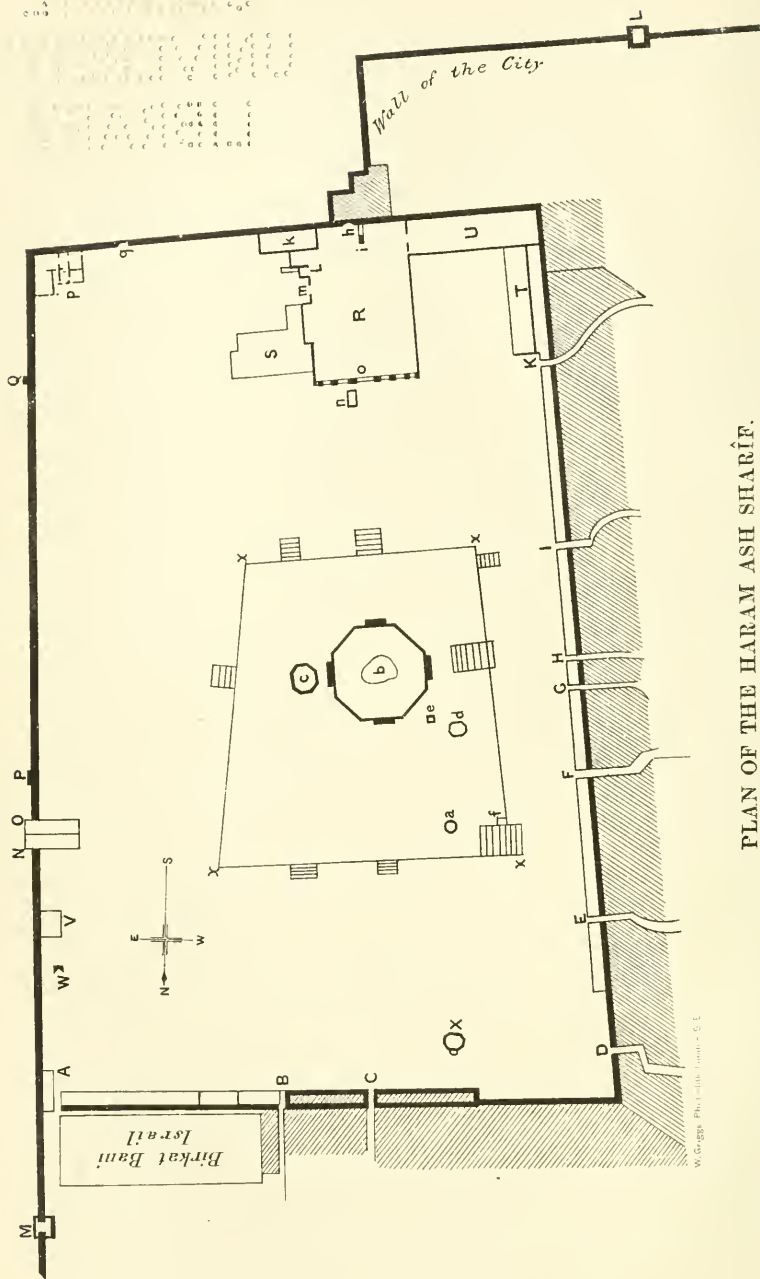
The object of the present paper is to show how utterly incorrect is this statement made by the late Mr. Fergusson in support of his theory that the Dome of the Rock (and not the present Church of the Holy Sepulchre) represents the Basilica erected by Constantine.

Whatever may be the arguments based upon the architectural style of the Dome of the Rock, it may be hoped that the passages here to be quoted, once and for all, will show that the historical evidence runs exactly counter to Mr. Fergusson's ingenious theory.

Within less than two centuries of the building of the Dome of the Rock by the Caliph 'Abd al Malik we have an account (Al Yakûbî) detailing the circumstances that led to its erection.

Thirty years later there is a minute description of the building (Ibn al Fakih), showing that the present edifice is almost intact, that of 'Abd al Malik; and a work written by a Spanish traveller of about the same date proves that many of the other buildings occupying the Haram Area were displaced neither during the Crusaders' occupation, nor at the restoration under Saladin.

¹ Article *Jerusalem*, in "Smith's Dictionary of the Bible," vol. i, p. 1030.



PLAN OF THE HARAM ASH SHARIF.

Passages from the writings of Mas'ûdi, who lived a century and a half before the first Crusade, prove that in his days the Church of the Holy Sepulchre was, as now, the scene of the so-called miracle of the Holy Fire. The short description of the Holy City by Ibn Haukal-*upon*-Istakhrî (A.D. 978) closes the series of my present translations, for Mukaddasî's account, written a decade later, has already been published by the "Palestine Pilgrims," and part of the Journal of Nâsiri Khusrau, half a century after him again, is very shortly to appear in a volume of the same series.

PLAN.

References to the Plan of the Haram Area at Jerusalem as it exists at the *present* day :—¹

- A. Bâb al Asbât (Gate of the Tribes).
- B. Bâb Hittah (Gate of Remission).
- C. Bâb Sharaf al Anbiyâ (of the Glory of the Prophets), also called Bâb ad Dawâdariyyah (of the Secretariat); and Bâb al Atm (of the Darkness).
- D. Bâb al Ghawânimah (of the Ghânim family), anciently called the Bâb al Khalîl (of Abraham, the Friend).
- E. Bâb 'Alâ ad Dîn al Busîri, also called Bâb an Nathir (of the Inspector), and anciently Bâb Mikâîl (of Michael).
- F. Bâb al Hadîd (of Iron).
- G. Bâb al Kattanîn (of the Cotton Merchants).
- H. Bâb al Mutawaddâ (of the place for Ablution), also called Bâb al Matâra (of rain).
- I. Bâb as Silsilah (of the Chain); ancient, the Bâb Dâûd.
- K. Bâb al Maghâribah (of the Mogrebins), also called Bâb Mohammed or An Nabî (of the Prophet).
- L. City Gate, called Bâb al Maghâribah; and by the Franks the Mogrebin, or Dung Gate.
- M. City Gate, called Bâb Sitti Maryam (of Our Lady Mary); also Gate of St. Stephen, or Gate of Jericho.
- N. Bâb al Taubah (of Repentance).
- O. Bâb ar Rahmah (of Mercy). These two form the Golden Gate, long since closed.
- P. Bâb al Burâk, or Al Janâiz (of the Funerals); long since closed.
- Q. Pillar in the Wall marking the place of the Bridge as Sirât.
- R. Jâmi' al Aksâ.
- S. Madrassah al Farsiyyah.
- T. Jâmi' al Maghâribah.
- V. Aksa al Kadîmah (ancient Aksa), also Al Baka'at al Baidâ, said to have been built by the Templars, and used as their armoury.
- V. Kursi Sulaiman (Solomon's Throne).
- W. Makam (Station of) Iliyâs (Elias), or Al Khidr (St. George, the Green One).

¹ Reduced from the Ordnance Survey and added to from M. de Vogüé's "Histoire de Jérusalem."

X. Kursi Isâ (Throne of Jesus).

xxx. Platform of the Rock.

a. Kubbat al Alwah (Dome of the Tablets), or K. al Arwah (D. of the Spirits).

b. The Rock.

c. Kubbat as Silsilah (Dome of the Chain).

d. Kubbat al Mi'râj (D. of the Ascension of Mohammed into Heaven).

e. Kubbat Jibrail (of Gabriel).

f. Kubbat al Khidr (of St. George).

g. Mihrâb Dâûd (Oratory of David).

h. Great Mihrâb of the Aksa Mosque, showing the direction of the Kiblah, Mekka.

i. Mimbar (Pulpit).

k. Ancient Jâmi' (Mosque of) Omar.

l. Mihrâb Zakariyyah, (Prayer-niche of Zachariah).

m. Eastern door of the Mosque.

n. Well of the Leaves.

o. Great central Gate of the Mosque.

p. Mahd 'Isa (Cradle of Jesus).

The earliest account, by an Arab writer, that I have been able to discover of the building of the Dome of the Rock, is the passage referred to above, in Al Yakûbî's History, written about the year 260 A.H., corresponding to 874 A.D. Al Yakûbî was not a contemporary, but lived nearly two centuries after the event; his testimony, however, among a people who pay such attention to the transmission of oral tradition, is in a far higher degree worthy of reliance than would be, say, an account written at the present time, descriptive of the events that took place in the reign of Queen Anne. Al Yakûbî, or, as he is more correctly named, Ibn Wadhih, is one of the earliest of Moslem writers on history and geography. He was a contemporary of the sons of Hârûn ar Rashîd, and other matters connected with his biography may be found set forth in the Latin preface which the learned Dutchman, M. Houtsma, has prefixed to his excellent edition of the Arabic text of the *Historie* (from a *Cambridge MS.* be it noted, for the climate of our Universities is not favourable to the cultivation of Oriental scholarship among native Britons).

In order to make clear to my readers how matters stood at the date of the building of the Dome of the Rock, and what were the political exigencies which induced the Caliph 'Abd al Malik, as the text states, to erect a Dome over the Rock at Jerusalem, I cannot do better than quote a passage from the writings of my friend, the late Professor Palmer, whose words are the more remarkable in their precision when it is remembered that he had not Yakûbî's text before his eyes in writing his account of "the Mohammedan Conquest":—"In 684 A.D., in the reign of

¹ P. 78, chap. iv, of "Jerusalem the City of Herod and Saladin," by W. Besant and E. H. Palmer. 1871.

'Abd el Melik, the ninth successor of Mohammed, and the fifth Caliph of the house of Omawiyah, events happened which once more turned people's attention to the City of David. For eight years the Mussulman Empire had been distracted by factions and party quarrels. The inhabitants of the two holy cities, Mecca and Medīna, had risen against the authority of the legitimate Caliphs, and had proclaimed 'Abd Allah Ibn Zobeir their spiritual and temporal head. Yezid and Mo'áwíyeh had in vain attempted to suppress the insurrection; the usurper had contrived to make his authority acknowledged throughout Arabia and the African provinces, and had established the seat of his government at Mecca itself. 'Abd el Melik trembled for his own rule; year after year crowds of pilgrims would visit the Ka'abah, and Ibn Zobeir's religious and political influence would thus become disseminated throughout the whole of Islam. In order to avoid these consequences, and at the same time to weaken his rival's prestige, 'Abd el Melik conceived the plan of diverting men's minds from the Pilgrimage to Mecca, and inducing them to make the Pilgrimage to Jerusalem instead."

What Al Yakûbî says is as follows :—¹

"Then 'Abd al Malik forbade the people of Syria to make the Pilgrimage (to Mekka): and this by reason that 'Abd Allah Ibn az Zubair did seize on them during the time of the Pilgrimage, and did force them to pay him allegiance. Which, 'Abd al Malik having knowledge of, forbade the people to journey forth to Mekka. But the people murmured thereat, saying, "How dost thou forbid us to make the pilgrimage to Allah's House, seeing that the same is a commandment of Allah upon us?" And the Khalif answered them, "Hath not Ibn Shiháb az Zuhrí² told you how the Apostle of Allah did say—*Men shall journey to but three Masjids* (Mosques, namely), *Al Masjid Al Harâm* (at Mekka), *my Masjid* (at Madīna), *and the Masjid of the Holy City* (which is Jerusalem). So this last is now appointed for you (as a place of worship), in lieu of the Masjid al Harâm (of Mekka). And this Rock (the Sakhrâh of Jerusalem), of which it is reported that upon it the Apostle of Allah set his foot when he ascended into Heaven, shall be unto you in the place of the Ka'abah."

"So 'Abd al Malik built above the Sakhrâh a Dome, and hung it around with curtains of brocade (Dibâj), and he instituted doorkeepers for the same. And the people took the custom of circumambulating the Rock (as Sakhrâh of Jerusalem), even as they had paced round the Ka'abah (at Mekka), and the usage continued thus all the days of the dynasty of the Ommeiyads."

The earliest topographical account, by a Moslem, of Jerusalem and the

¹ "Ibn Wadhîh Historiæ," edidit M. Th. Houtsma. Brill. Lugd., Batav., 1883, ii, p. 311.

² A celebrated Traditionist who was personally acquainted with many of the Prophet's companions. He died in A.H. 124 (A.D. 742), being seventy-two or more years old. His life is given by Ibn Khallikan (de Slane's Translation), vol. ii, p. 581.

Haram Area dates, if I mistake not, from about thirty years later than when Yakûbî wrote his History. Yakûbî himself, it is true, mentions Jerusalem in his geographical work, but gives no description of the city, and it is to the pen of Ibn al Fakîh, who wrote in A.D. 903 (A.H. 290), that we are indebted for the very curious and exact description of the Dome of the Rock which I have translated from the text lately edited by the learned Professor of Arabic at Leyden. Unfortunately Ibn al Fakîh's work has not come down to us in its entirety, but only in the form of an Abridgment by a certain 'Ali Shaizari. Internal evidence, however, goes to prove that in pruning somewhat rudely the fair proportions of the work of his predecessor, Shaizari added little or nothing of his own. Hence the work in its present form may still be held to date from the year 290 A.H.; but for further details of the author, his work, and the Abridgment, I may refer my readers to the Latin preface of the edition, from which I translate the following paragraphs:—¹

“It is said that the length of the Noble Sanctuary at Jerusalem is 1,000 ells, and its width 700 ells. There are (in its buildings) 4,000 beams of wood, 700 pillars (of stone), and 500 brass chains. It is lighted every night by 1,600 lamps (*kandîl*), and it is served by 140 slaves (*khâdim*). The monthly allowance of olive oil is 100 kists,² and yearly they provide 800,000 ells of matting. There are also 15,000 water jars. Within the Noble Sanctuary are 16 arks (*tabât*) for the volumes of the Kurân set apart for public service, and these manuscripts are the admiration of all men. There are four pulpits (*mimbar*) for voluntary preachers, and one set apart for the salaried preacher; and there are also four tanks for the Ablution. On the various roofs (of the Mosque, and domes), in the place of clay, are used 45,000 sheets of lead. To the right hand of the Mihrâb (or niche towards Mekka in the Aksa Mosque³) is a slab on which, in a circle, is written the name of Mohammed—the blessing of Allah be upon him!—and on a white stone behind the Kiblah (wall, to the south) is the inscription, “In the name of Allah the Merciful, the Compassionate Mohammed is Allah's Apostle. Hamzah⁴ was his helper.” Within the Mosque (Area) are three maksûrahs (or railed spaces) for the women, each maksûrah being 70 ells in length. There are within and without (the Sanctuary) in all 50 gates (and doors).”

“In the middle of the Haram Area is a platform, measuring 300 ells in length by 140 ells across, and its height is 9 ells.⁵ It has six flights of stairs leading up to the Dome of the Rock. The Dome rises in the middle of this platform. (Its ground plan) measures 100 ells by 100, its height

¹ “Ibn al Fakîh,” edidit de Geoeje; Lugh. Bat., 1885; p. 100.

² Kist (from the Greek *ξέστης*, and the Roman Sextarius) was equivalent to about a quart and a half of our measure.

³ Plan at II.

⁴ The Prophet's uncle, who fell at the Battle of Ohod.

⁵ *x, x, x, x*, of the Plan. Taking the ell at 1½ feet, this gives 450 feet by 225 feet, which is considerably less than the size of the present platform.

is 70 ells, and its circumference is 360 ells.¹ In the Dome every night they light 300 lamps. It has four gates roofed over; and at each gate are four doors; and over each gate is a portico (*dukkānah*²) of marble. The stone of the rock measures 34 ells by 27 ells; and under it is a cavern in which the people pray. This is capable of containing 62 persons. (The edifice of) the Dome is covered with white marble, and its roof with red gold. In its walls and high in (the drum) are 56 windows (*bāb*)³ glazed with glass of various hues; each window measures 6 ells high by 6 spans across. The Dome which was built by 'Abd al Malik Ibn Marwān is supported on 12 piers (*rukn*) and 30 pillars (*'amūd*).⁴ It consists of a dome over a dome (*i.e.*, an inner and an outer), on which are sheets of lead, and sheets of copper gilt. The walls, both within and without, are faced with white marble. To the east of the Dome of the Rock stands the Dome of the Chain. It is supported by 20⁵ marble columns, and its roof is covered with sheets of lead. In front of it (again to the east) is the praying station of Al Khidr (St. George or Elias).⁶ The platform occupies the middle of the Haram Area (*al Masjid*). In its northern part is the Dome of the Prophet,⁷ and the station of Gabriel; near the Sakhrāh is the Dome of the Ascension.⁸ Among the gates (of the Haram Area) are Bāb

¹ The figures given are, considering they represent round numbers, fairly exact. Taking the ell (*dhirā'*) at an average of 18 inches, this gives circumference 540 feet (round the present octagon measures about 528 feet), and height 105 feet (97 feet is the exact measurement up to the pinnacle).

² In my translation of Mukaddasī (p. 45, line 4) the word (*Suffah*) rendered *Balustrade* should be *Porch*. Mukaddasī's *suffah* and Ibn al Fakih's *dukkānah* both denote the peristyle built at each of the four gates of the Dome.

³ In the present edifice (judging from the plan in De Vogüé's "Jérusalem") there are 15 windows in the drum under the Dome, and 5 in each of the 8 walls that form the octagon below. This ($5 \times 8 + 16$) makes up exactly 56, the number given.

⁴ In the present edifice, as may be seen in the accompanying Plan, the 12 piers,—4 in the inner circle (by which the Dome is supported), and 8 marking the angles of the octagon, still exist. The arrangement and number of the pillars appear, however, to have been altered. To judge by De Vogüé's plan there are between each of the 4 piers of the inner circle 3 pillars, and between each of the 8 outer piers 2 pillars ($4 \times 3 + 8 \times 2$), making 28 pillars in all, instead of 30 as given by Ibn Fakih. The difference, however, is not very material.

⁵ Plan C. There are (to judge from De Vogüé's plan) only 17 columns in the present edifice, 6 in the inner, and 11 in the outer circle. However, though in the plan he draws 6 columns in the inner circle supporting the Dome, he writes of it in the text as a *pentagon*.

⁶ Plan W.

⁷ Plan X?

⁸ From this it would appear that the Dome of the Prophet was distinct from the Dome of the Ascension. Suyūti, writing in 1470 A.D., did not know which was the Dome of the Prophet, and imagined it to be the Dome of the Chain. In the enumeration which follows of the Gates, the Mihrābs and other notable places standing near are mentioned along with the gates.

Dâûd,¹ Bâb Hittah,² Bâb an Nabî (of the Prophet),³ Bâb at Taubah (Gate of Repentance),⁴ and there is here the Mihrâb Maryam (Prayer Niche of Mary), Bâb al Wâdi,⁵ Bâb ar Rahmah (Gate of Mercy), with the Mihrâb Zakariyyâ, Abwâb al Asbât⁶ (the Gates of the Tribes), with the Cave of Abraham,⁷ the Mihrâb of Jacob, and Bâb Dâr Umm Khâlid (the Gate of the House of Khalid's Mother). Outside the Haram Area (Al Masjid) at the City Gate to the west, is the Mihrâb Dâûd (David's Prayer-niche).⁸ The place of the tying up of (the steed) Al Burak is in the angle of the southern minaret.⁹ The Spring of Siloam ('Ain Sulwân) lies to the south of the Haram Area. The Mount of Olives overlooks the Haram Area, being separated therefrom by the Wâdy Jahannum. From it (the Mount ?) Jesus was taken up, across it (the Wady ?) will extend the bridge As Sirât,¹⁰ and there too is the Place of Prayer of the Khalif 'Omar, also the tombs of the prophets. Bait Lahm (Bethlehem) lies a farsakh (or league) distant from the Holy City, it is the place where Jesus was born."

"Masjid Ibrahim (Hebron) is about 15 miles away. There are here the tombs of Abraham, Isaac, Jacob, Joseph, and Sarah. The Prophet (Mohammed's) shoe (na'l) lies to the front (of these)."

My next notice of the buildings in the Noble Sanctuary is taken from the account written by the Spanish Arab, Ibn 'Abd Rabbih, who has left us a curious historical work of very varied contents called "*Al Ikd al Farîd*," *The Necklet of Unique Pearls*. He flourished about the same time as Ibn al Fakîh, and though the exact date of his visit to Jerusalem is not known, the date of his death, A.H. 328 (corresponding to the year 940 A.D.)

¹ The present Bâb as Silsilah, Plan I.

² Plan B.

³ Plan K.

⁴ Plan N.

⁵ Bâb al Wâdi, the Gate of the Valley, must be the Bâb al Janâiz, the Gate of Funerals (Plan P), now walled up, to the south of the Golden Gate. This last is here mentioned under the names of its two halves, the Gate of Mercy (Plan N), and the Gate of Repentance (Plan O).

⁶ Plan A.

⁷ I am unable to identify these last two places and the last gate mentioned.

⁸ In later times David's Prayer Niche was shown (as at the present day) at a spot in the south wall of the Haram Area (Plan G). Anciently it was identified with a building in the castle. A generation later the historian Mas'udi writes (Vol. I, p. 109, of the edition published by M. Barbier de Meynard): "David built a House of Worship in Kâr Salâm, which is the Holy City, and it is the same building which exists in our own day, in the year 332 (A.D. 943), and is called the Mihrâb Dâûd. In all the Holy City, at the present time, there is no building higher than it, and from the summit thereof you may see the Stinking Lake (Dead Sea) and the River Jordan."

⁹ Shown here at the present day. Plan K.

¹⁰ Plan Q.

would show that he is describing the Holy City as it existed during the first half of the tenth century of our era. Ibn 'Abd Rabbih is quoted by Mujîr ad Dîn (in the sixteenth century A.D.) under the name of Al Kurtubî, the Cordovan.

Good MSS. of Ibn 'Abd Rabbih's work are unfortunately lacking, and for my translation I have been obliged to rely on the text printed at Boulak, near Cairo, presumably from an Egyptian MS. which leaves much to be desired in the matter of scholarly editing.

*"Description of the Mosque of the Holy City, and what therein is of
Holy Places of the Prophets."*¹

The length of the Haram Area is 784 ells, and its breadth 455 ells, of the ells of the Imâm.² They light the Noble Sanctuary with 1,500 lamps, (kandîl); and in its structures have been employed 6,900 beams of wood. Its gates are 50 in number, and there are 684 columns ('Amûd). Within the Sakhrâh (Dome of the Rock) are 30 columns, and the columns which are outside the Sakhrâh (*Khârij as Sakhrâh*) are 18 in number.³ The Dome is covered by means of 3,392 sheets of lead, over which are placed plates of brass, gilded, which number 10,210. The total number of the lamps that light the Sakhrâh is 464, which hang by hooks and chains of copper. The height of the Sakhrâh of the Holy City (in ancient days) when it reached heavenward was 12 miles, and the people of Jericho (to the east)

¹ Vol. iii, p. 366 *et seq.*, of the Cairo edition printed in A.H. 1293.

² If the reading *Imâm* be correct, the Imâm in question is doubtless the Caliph Ali, who inaugurated many novelties besides the standard of the ell. At the present day the Haram Area measures, in round numbers, 1,500 feet by 900; or in ells, 1,000 ells by 600.

Various other Arab writers have given the dimensions, and it may be worth tabulating them for the convenience of reference.

	Length.	Width.
	in ells.	in ells.
Ibn al Fakîh (A.D. 903), and Mukaddasî (A.D. 985) ..	1,000	700
Ibn 'Abd Rabbih (A.D. 940)	784	455
Inscription in northern wall of Haram Area, as read by Nasîrî Khusrau (A.D. 1047)	750	455
Ditto as read by the author of the "Muthîr al Ghîrâm" ..	784	455
Ditto as read by Ali of Herat in A.D. 1200	700	455
Ditto as read by M. C. Ganneau in 1874	{ 784 } or { 734 }	455
By the measurement of the author of the "Muthîr al Ghîrâm" (A.D. 1350) Eastern wall	683	455
Western wall	650	

³ See note¹, p. 95. It must be observed that *As Sakhrâh* (the Rock) is used to denote both the Dome and the Rock itself; just as *Al Masjîd* means the whole Haram Area, and sometimes more particularly the Mosque (or Masjîd) Al Aksa in its southern part.

profited by its shadow, as did also those of 'Amwâs (to the west); and there was set over it a red ruby which shone giving light even to the people of the Balkâ, so that those who lived there were able to spin by the light thereof.

In the Noble Sanctuary (Al Masjid) are three Maksûrahs (enclosed spaces) for the women,¹ the length of each Maksûrah being 80 ells, and its breadth 50. In the Mosque are 600 chains for the suspending of the lamps, each chain being 18 ells in length, also 70 copper sieves² (*ghirbâl*) and 7 cone-shaped stands (*sanaubarât*) for the lamps. Further, 70 complete copies of the Koran and 6 copies of great size, each page of which is made out of a single skin of parchment; these last are placed on desks (*kursî*). (The Noble Sanctuary) contains 10 Mihrâbs, 15 Domes, 24 wells (*jubb*) for water and 4 minarets from whence they make the call to prayer. All the roofs, that is, of the Mosque, the Domes and the Minarets, are covered with gilded plates. Of servants appointed to its service there are,—together with their families, 230 persons,— Mamlûks (slaves), all of whom receive their rations from the Public Treasury. Monthly there is allowed (for the Noble Sanctuary) 700 Kists Ibrâhîmî, the weight of the kist being a ratl and a half of the large weight.³ The allowance yearly of mats is 8,000 of the same. For the hanks of cotton for the wicks of the lamps they allow yearly 12 Dinârs; for lamp glasses 33 Dinârs, and for the payment of the workmen who repair the various roofs in the Noble Sanctuary there is 15 Dinars yearly.

*Of Holy Places of the Prophets in Jerusalem are the following:—*Under the corner of the Masjid is the spot where the Prophet tied up his steed, Al Burâk.⁴ Leading into the Noble Sanctuary are the Bâb Dâûd,⁵ the Bâb Sulaimân, and the Bâb Hittah, which last is intended by Allah when He saith,⁶ “Say ye Hittah” (Forgiveness), and there is no God but Allah; but some men say “Hintah” (Wheat), making a jest thereof, for which may Allah curse them in their impiety!

Also there are the Bâb Muhammad⁷ (the Gate of the Prophet); and Bâb at Tanbah (the Gate of Repentance); where Allah vouchsafed repentance to David.

¹ Much the same is stated by Ibn al Fakîh. I am not at all sure whether “Al Masjid” here refers to the Aksa Mosque or the whole Haram Area. It would seem difficult to accommodate three railed-in spaces, each measuring 120 feet by 75 feet, *within* the Aksa building, though what follows would seem to imply that this is what is meant.

² What these were for I know not.

³ What the Kist of Ibrâhîm exactly denotes I am unable to state. The Syrian Ratl weighed about 6 lbs.; for the Arabs, like the Romans, estimated their measures of capacity by the weight of oil or wine. The Dinâr mentioned a few lines later may be taken roughly as worth 10s. English.

⁴ Plan at K.

⁵ Gate of David, now called Bâb as Silsilah, Gate of the Chain. Plan I.

⁶ Kurân, II, 55.

⁷ Plan K.

And the Bâb ar Rahmah (Gate of Mercy), of which Allah has made mention in His Book, saying,¹ "A gate within which is Mercy, while without the same is Punishment," alluding to the Wâdy Jahannum which lies on the east of the Holy City.

And the Abwâb al Asbât (the Gates of the Tribes),² the tribes being the Tribes of the Children of Israel,—and the Gates are six in number.

Also the Bâb al Walîd, the Bâb al Hâshimî, the Bâb al Khidr³ (Elias or St. George), and the Bâb as Sakinah (the Gate of the Shechina).⁴

In the Noble Sanctuary further are the Mihrâb of Mary (mother of Jesus) the daughter of 'Amrân, whither the Angels were wont to bring to her the fruits of winter during the summer time, and summer fruits in the winter time.

Also the Mihrâb of Zakariyya (father of the Baptist),⁵ where the Angels gave him the good news (of the birth) of John, at a time when he was standing praying therein. Also the Mihrâb Ya'kûb (Jacob) and the Kursî Sulaiman (Throne of Solomon)⁶ where he used to pray to Allah; and the Minaret of Abraham, the Friend of The Merciful, whither he was wont to retire for worship. There are likewise here the Dome of the Apostle (Muhammad), from whence he made his ascent into Heaven; the Dome over the spot where the Apostle prayed with the (former) Prophets; also the Dome where, during the times of the Children of Israel, there hung down the Chain that gave judgment (of truth or lying) between them.⁷ Further the Praying place of Jibrâil (Gabriel) and the Praying place of Al Khidr (Elias).⁸

Now when thou enterest the Sakhrâh (Dome of the Rock) make thy prayer in the three corners thereof; and also pray on the Slab which rivals the Rock itself in glory, for it lies over a gate of the gates of Paradise.

The birth-place of Jesus, the son of Mary, is (at Bethlehem) about three miles distant from the Noble Sanctuary; Abraham's Mosque (which is Hebron), wherein is his tomb, is 18 miles from the Holy City. The (Mâlikite) Mihrâb of this Mosque lies on the western side.

Among the Excellent Sights of the Holy City are these. The place of the Bridge As Sirât⁹ is in the Holy City, and from Jahannum (Hell)—may Allah keep us therefrom!—it will reach even unto the Holy City.

On the day of Resurrection Paradise will be brought as a bride to the Holy City, and the Ka'abah also shall come along with her, so that they

¹ Kurân, LVII, 13.

² Plan A.

³ These three gates I cannot identify; they are also mentioned by Mukad-dasî.

⁴ Plan I.

⁵ Plan I.

⁶ Plan V.

⁷ The Dome of the Chain. Plan c.

⁸ Plan e and W.

⁹ Plan Q.

shall cry "All hail to those who come as pilgrims ! and all hail to her to whom pilgrimage is made !" And the Black Stone shall be brought, in bridal procession, to the Holy City, and the Black Stone on that day shall be greater in size than the Hill of Abu Kubais.¹

Among the Excellencies of the Holy City are that Allah did take up His Prophet into Heaven from the Holy City, as likewise Jesus, the son of Mary. And verily at some time the Antichrist shall conquer Christ in all and every part of the earth, excepting only in the Holy City. And Allah has forbidden Gog and Magog ever to enter the Holy City.

Lastly, that all the Saints and Holy Men of God are from the Holy City, and Adam and Moses and Joseph, and the great company of the Prophets of the Children of Israel all left by testament the command that they should be buried in the Holy City.

The labours of the French Orientalist, M. Barbier de Meynard, and the patronage of the *Société Asiatique*, have made the most amusing of Arab chronicles, the "Meadows of Gold" of Mas'ûdi, accessible to all. In nine octavo volumes of moderate size we have on every page the text, and below it the French translation, so that all who run may read. Mas'ûdi penned his "Meadows of Gold" in the year 943 after Christ (A.H. 332), and though he has given no detailed description of Jerusalem, or the Temple Area, there are some incidental notices of the buildings here, which are of capital importance in our investigations. In the following extract we have, if I mistake not, the earliest reference by an Arab author to the Church of the Resurrection, or Holy Sepulchre, which the Muslim by a designed corruption of the word *Kayâmah* (*Anastasis*) called the *Kanîsâh al Kumâmah*, "the Church of the Sweepings," or "Dunghill." The well-known imposture which is called the Miracle of the Holy Fire, is first noticed by the Christian Pilgrim, Bernard the Wise, in A.D. 867. Mas'ûdi's testimony, therefore, some eighty years later, that the miracle took place in the *Church of the Holy Sepulchre* of the Christians, a well-known place, quite distinct from the Dome of the Rock (which last Mr. Fergusson would have us believe was, at that period, known as the *Holy Sepulchre*), seems to me to overturn the foundations of the theory that Constantine's Basilica is the Dome of the Rock. Mas'ûdi was sceptical as to the miraculous origin of the Fire ; his account is as follows :—²

"On the 5th day of the (Syrian) month Tishrîn I (October) is the festival of the *Kanîsâh al Kumâmah* (Church of the Sepulchre) at Jerusalem. The Christians assemble for this festival from out all lands. For on it the Fire from Heaven doth descend among them, so that they kindle therefrom the candles. The Muslims also are wont to assemble in great crowds to see the sight of the festival. It is the custom also at this time to pluck olive leaves. The Christians hold many legends there anent ; but the Fire is produced by a clever artifice, which is kept a great secret."

¹ Overhanging Mekka on the west.

² Mas'ûdi, iii, p. 405.

Another passage from the same work is curious as showing what were the Churches in the hands of the Christians in Jerusalem, in A.D. 943, and also what were according to Muslim traditions the buildings, afterwards the Aksa Mosque and the Church of the Resurrection, in ancient Jewish days. After relating the history of the reign of Solomon, Mas'ûdi concludes his chapter with the following paragraph :—¹

“It was Solomon who first built the Holy House, which same is now the Aksa Mosque—may Allah bless its precincts! When he had completed the building thereof, he set about building a house for his own use; this last is the place that in our own day is called the Kanîsah al Kumâmah (the Church of the Resurrection); it is the largest Church in Jerusalem belonging to the Christians. They have also in the Holy City other greatly honoured churches besides this one, as for example the Kanîsah Sihyûn (the Church of Sion), of which David has made mention (in the Psalms); and the Church known as the Jismâniyyah.² This last, they say, encloses the tomb of David.”

From the latter half of the tenth century after Christ, and onwards to the date of the taking of Jerusalem by the Crusaders, the descriptions of the Holy City by Arab authors become more numerous, and fuller in detail. I propose to translate the short notice left us by the Geographer Ibn Haukal (A.D. 978 = A.H. 367). This personage re-edited and somewhat enlarged the work of his predecessor, Istakhri (A.D. 951 = A.H. 340), who had written a work to elucidate the charts or maps of the countries of Islâm (unfortunately no longer extant) of one Balkhî, drawn in the year 309 A.H., corresponding to 921 of our era. Ibn Haukal furnishes not an uncommon example of the method employed in the East for the writing of books. To save yourself the trouble of original composition you take an earlier author, annotate and add commentary to his work, and bring out the plagiarism under your own name. It is as though, instead of editing Boswell, Mr. Croker had given us the “Life of Johnson” as his own work, suppressing all mention of the original author.

Thanks to the researches of the learned Dutch orientalist, M. de Goeje, Ibn Haukal and Istakhri and Balkhî are all now set in their proper places, and we have the two first edited in Arabic separately (although Ibn Haukal includes for the most part, and is a repetition merely, with augmentations, of Istakhri), in the “*Bibliotheca Geographorum Arabicorum*,” Vols. I and II.

The description of Jerusalem is as follows :—³

“The Holy City is nearly as large as Al Ramlah (the capital of the

¹ Mas'ûdi, i, p. 111.

² Jismâniyyah is the Arabic corruption of the name Gethsemane. The original name has the meaning of *Garden of the Olive-press*, while Jismâniyyah in Arabic has the signification of “*the Incarnation*,” and commemorates a different incident in our Lord's history.

³ Vol. II, Ibn Haukal, p. 111, corresponding to the section in vol. I, p. 57, of Istakhri.

province of Filastîn). It is a city perched high on the hills, and you have to go up to it from all sides. There is here a Mosque, a greater than which does not exist in all Islâm. The main building (which is the Aksa Mosque) occupies the south-western angle of the Mosque (Area, or Noble Sanctuary), and covers about half the breath of the same.¹ The remainder of the Haram Area is left free, and is nowhere built over, except in the part around the Rock. At this place there has been raised a stone (terrace) like a platform, of great unhewn blocks, in the centre of which, covering the Rock, is a magnificent Dome. The Rock itself is about breast high above the ground, its length and breadth being about equal, that is to say, some ten ells and odd, by the same across. You may descend into its interior by steps as though going down to a cellar (*sardâb*), through a door measuring some five ells by ten. The interior is neither square nor round, and is above a man's stature in height.

"In all Jerusalem there is no running water, excepting what comes from springs, that can be used to irrigate the fields, and yet it is the most fertile portion of Filastîn.

"In the City² is the Mihrâb of the Prophet David, a tall edifice built of stone, which, by measurement and calculation, I should say reached a height of fifty ells, and was thirty ells in the breadth. On its summit is an erection like a cell (*hujrah*), which is the Mihrâb mentioned by Allah—may he be exalted! (in the words of the Kuran,³ 'Hath the Story of the two pleaders reached thee, when they mounted the walls of David's Mihrâb?') When you come up to the Holy City from Ar Ramlah this is the first building that catches the eye, and you see it above the other houses of the town. In the Noble Sanctuary, too, are many other venerated Mihrâbs dedicated to other of the celebrated prophets."

Of far greater importance, however, than the short notice of Ibn Haukal—Istakhri, are the two very complete descriptions left by the Arab geographer, Mukaddasî (A.D. 985) and the Persian traveller, Nasiri-Khusrau (A.D. 1046) who wrote, respectively, a century, and half a century before the first Crusade. The account left us by the first of these, Mukaddasî, I have already translated for the Palestine Pilgrims' Text Society, and that given by the Persian will, I believe, very shortly appear in English dress, published under the same auspices. I need, therefore, only refer my readers to the rapidly increasing numbers of the "Pilgrims" for all details; but an incidental notice in Mukaddasî, seems to me sufficiently important to justify my quoting the passage from my translation. I conclude these notes with this passage which proves beyond a doubt that

¹ See *R* and *U* of the Plan.

² Ibn Haukal says, "In the Haram Area (Al Masjid)," but this is an oversight, or an addition by a later hand.

³ Chapter XXXVIII, 20.

⁴ P. 22 of my translation; p. 159 of the Text edited by M. de Goeje.

the Arabs of the eighth, ninth, and tenth centuries of our era had before their eyes both the Church of the Holy Sepulchre and the Dome of the Rock, two perfectly distinct buildings, one Christian, one Muslim, totally distinct in position, in plan, and in purpose.

After giving a long description of the great Omeyyad Mosque at Damascus, Mukaddasî has the following remarks :—

"Now one day I said, speaking to my father's brother, "O my Uncle, verily it was not well of the Khalif Al Walid to expend so much of the wealth of the Muslims on the Mosque at Damascus. Had he expended the same on making roads, or for Caravanserais, or in the restoration of the Fortresses, it would have been more fitting and more excellent of him." But my uncle said to me in answer, "O, my little son, you have not understanding ! Verily Al Walid was right, and he was prompted to do a worthy work. For he beheld Syria to be a country that had long been occupied by the Christians, and he noted herein the beautiful churches still belonging to them, so enchantingly fair, and renowned for their splendour ; even as are the Kumâmah (the Church of the Holy Sepulchre) and the Churches by Lydda and Edessa. So he sought to build for the Muslims a Mosque that should prevent their regarding these, and that should be unique and a wonder to the world. And in like manner is it not evident how the Khalif 'Abd al Malik, noting the greatness of the Dome of the Kumâmah and its magnificence, was moved lest it should dazzle the minds of the Muslims, and hence erected, above the Rock, the Dome which now is seen there ?"

NOTES FROM THE *QUARTERLY STATEMENTS*, 1886-7.

October, 1886.

Page 170. Holes in dolmens and menhirs also are well known to archaeologists. There is a known case where good faith has been sworn by joining hands through the hole in a menhir. Cup hollows also occur surrounded by circular trenches cut on flat rocks on hill-tops. These might contain rain-water, dew, or libations such as were commonly poured on rocks, as mentioned in the Old Testament. The account in the Zendavesta of the ceremony of purifying after contact with a dead body suggests an explanation of these hollows and circles. The man to be purified, we there read, used to pass from circle to circle and was sprinkled with water and *gomez* (the sacred Persian mixture) from the holes. The holes and the circles round them were made for the purpose according to measurements detailed in the Vendidad.

Page 173. The capital found at Ascalon is evidently Byzantine. Brickwork like that at Ascalon occurs in the Byzantine walls at Constantinople about Justinian's time. I found similar brickwork also in the ruins of Kadesh, near Tell Neby Mendeh.

Page 185. The Arab marriage custom here noted is interesting in connection with the survival of "Marriage by Capture," which Sir J. Lubbock and other antiquaries believe to be traceable in many countries.

Page 198. The investigations of the supposed second aqueduct to the Virgin's Pool do not seem to have led to the proof of its existence, nor do I think it at all likely that a second aqueduct would have been cut, as there could not have been any apparent use for it. The wall in Shaft B does not seem to have belonged to an aqueduct. Shaft A produced no results. Shaft C showed a surface channel of which there used to be many on this hill, but it is not shown to have gone to the Virgin's Pool. The idea that the roof of the existing Siloam tunnel is not of rock, but of slabs, with "hardly a joint visible," does not seem to me tenable. I examined the roof carefully throughout, and believe it to be entirely of live rock. It is never flat, as it would be if of covering slabs. Boys may have been employed to excavate the narrowest part, but in this the roof is, I think, most certainly rock-cut. Perhaps Mr. Schick may be able to go and see for himself.

I think it would be very useful to continue excavations along the aqueduct which leads westwards from the Pool of Siloam. Its end has not yet been traced, and it may lead to some pool now hidden, perhaps the "Dragon Well" of Nehemiah. Ancient mediæval maps—correctly or not—show such a reservoir.

Page 200. The derivation of Tell es Saph from Saph is interesting. Saph is, however, spelt with *Sad* and Saph with *Samech*, though, as I have before said, the S sounds in Syrian Arabic are not entirely distinguished, and moreover, Saph is probably not a Semitic word.

Page 204. I thoroughly agree with Rev. H. G. Tomkins as to the survival of old Pagan names of deities in the modern town and village nomenclature of Palestine, but great caution is necessary in such an inquiry. I doubt if any *Deir*, or "monastery," preserves a really old name (though we have of course Deir B'al). *Deir Tammeis* may be a corruption of the Latin Thomas, and it is remarkable that Tammuz (spelt with *Zaïn*, be it observed, *not* with S) is a name never found on Phœnician texts, although the Phœnicians worshipped Tammuz. The fact is, the word is not Semitic.

As to Sutech, Chabas ("Voyage d'un Égyptien," p. 344) denies that Set was ever so named. However this be, the word Sutuh (سطح) does not seem properly to represent Sutech, and it is a very common word for a piece of flat ground. We must content ourselves with Neby Shît for Set, I think, and I should be disposed to confine the inquiry *entirely to Villages and Ruins*. The names of the natural features of Palestine, as a rule, are modern. As a contribution I would suggest that *Bidich*, a place the name of which long puzzled me, is named from Bed, or Beda, a Phœnician god well known from inscriptions. Salchah also (Deut. iii, 10) may be named from the god Silek.

I am convinced that several of my derivations which Professor Palmer cut out in editing my name lists will stand fire in connection with this

inquiry, and are more likely to be right than derivations from dictionary Arabic. Others of my derivations which Professor Palmer adopted have the same tendency. I hope to have time to investigate this interesting question further, and have referred to it in "Syrian Stone Lore," p. 32.

January, 1887.

Page 35. The inscriptions here figured are in the Karmathian character.

Page 37. As to Hippos, see Neubauer's "Geography of the Talmud" (1868), p. 239, where he suggests that the Semitic name was *Susitha*. In this connection it seems to me that it would be interesting to inquire whether the Greek nomenclature of Palestine generally was, not always *original*, but represented a translation in some cases of the Semitic. This seems to have been the case at Elentheropolis, or the "city of free men," as we see from Jerome. Beth Gubrin was the "city of heroes," and these heroes were supposed to have been *Horim*, or Horites, because of the caves; but the later translation of Horim was "free men," and hence the Greek. This is not a speculation of my own, but can be shown from the ancient notices of the place.

Page 48. In support of Professor H. Lewis's views as to the original Aksa, I may note that I saw what I took to be foundations of pillars east of the present east wall of the Mosque on the surface. It would be worth while to have these examined and planned. I believe I once had some measurements, but cannot find them.

Page 55. The new tomb at Kolonieh is very interesting, but I doubt if it can be as old as the third century. The forms of the letters in the text suggest a somewhat later date.

Page 57. The reason why I do not write again as to the "City of David" is that my views were published in 1878, "Handbook to the Bible," pp. 336-340. I have seen nothing to make me alter my views in any substantial degree. I never claimed that the "City of David" was a term equivalent to Jerusalem generally, but only that it meant—as one would naturally suppose—the City of David's time. Fifteen years of controversy have shown me that the result always is that the disputants retain their opinions, and of course there could be no controversy if there was nothing to be said on one side.

I would beg leave, however, to remark that we should perhaps make a distinction between the various Biblical books in treating the question. It is universally allowed that the Books of Samuel are older than Kings, and that Chronicles belong to the time of Ezra at earliest. Is it certain that the words City of David are used always with the same meaning?

I have never denied that a Royal Palace and a Royal Burial-place on Ophel existed, and it would be interesting to find traces of the latter, which excavation might lead us to. I doubt, however, if David, Solomon, and the more famous kings were buried here. "The field of burial of the Kings," "The Garden of Uzzah," near Solomon's Palace on Ophel, was, I

think, a different place from the "Tombs of the Kings of Israel," into which we know unworthy kings were denied admission. Yet this "field of burial" was, in a sense, the "Sepulchres of David" since the unworthy kings were his descendants.

We know that Solomon's palace was *not* in the City of David; and we know that Millo, a place round which a wall was built, *was* in the City of David. The Greek renders Millo by Akra, and I think there is no doubt whatever that Akra was where Sir C. Warren places it, viz., west of the Temple: therefore the City of David was west of the Temple. I cannot see how we can get out of this, and in such case my site for the tombs of the Great Kings becomes possible. I only differ from Sir C. Warren in supposing that the Upper City also should be included in the name City of David, as well as its synonym Zion—which by the bye has lately been thought to be also a synonym of Jebus ("the sunny" = "the dry").

The Book of Chronicles does not say that the wall of Manasseh was built "round" the City of David. It says, on the contrary, "outside" the City of David. The result of the theory which places David's capital on the little narrow sloping spur of Ophel dominated by the natural fortress of the Upper City which has a deep natural fosse all round it is that the names Zion, Millo, Ophel, City of David, and Akra, are all crowded into this little slope, and the rest of the site of Jerusalem is left without any ancient nomenclature. Now to me it seems unimportant where the words City of David are written on the map, so long as it is agreed that the Upper City formed the main part of David's capital. It is the express opinion of Josephus that this was the case, and I agree in thinking with Sir C. Warren that the modern understanding of the incidental reference in Nehemiah is not enough to upset the opinion of Josephus. This is the really important question, Was David's capital a city or only a little village on Ophel? and my contention in this respect seems to be admitted at all events by H. B. S. W. Jebus is described as a strongly fortified town, standing a siege and confident of its impregnability. No engineer, I think, would be able to agree that a fortress could have stood on Ophel south of the Temple, seeing that it was commanded by the Upper City. The proximity of Ophel to the Spring of Gihon seems to have no bearing on the question, as I have before pointed out, because fortresses in Palestine are often far away from the nearest spring. Moreover, it is quite possible that the Hammâm esh Shefa may have been running in David's time above ground. As to the aqueduct to the "west side of the City of David," that, I think, has at last been discovered running from Siloam along the south slope of the Upper City westwards, and it ought to be followed to its end.

C. R. CONDER.

Note.—Plato distinguishes three forms of human thought—Fancy, Opinion, and Knowledge (see Menon, 99). Fancy is represented by Pilgrim diaries, Opinion by the controversies, but Knowledge by the results of exploration.

NOTES ON PERROT AND CHIPIEZ'S "HISTOIRE DE L'ART."

VOL. IV.—SARDINIA, JUDEA, AND ASIA MINOR.

THE influence of the work of the Palestine Exploration Fund is seen by its reproduction in such books as the above. MM. Perrot and Chipiez have added a volume to their valuable set of books on Ancient Art, in which a large amount of information and many plates are derived from the Memoirs of the Palestine Survey, and from such works as the "Recovery of Jerusalem," "Heth and Moab," &c. As this book will no doubt be much read by those who have followed the Palestine Exploration Fund work, I venture to put down a few notes which occur to me in reading it.

Page 180. The plan of the Royal Quarries given in the Jerusalem volume Portfolio seems to be forgotten, only the rough sketch in the *Quarterly Statement* being noticed.

Page 185. Nothing is said in speaking of the dressing of the Haram stones of the peculiar criss-cross tooling which is found on them and at Hebron, but not on other drafted masonry—*e.g.*, Baalbek and 'Arāk el Emīr. This tooling is distinctive.

Page 197. The Golden Gate is here supposed to have been named by a mistranslation of the Greek (Acts iii, 3), "Beautiful Gate." Tradition has, however, always placed the latter on the west side of the Haram, where it is noticed by many mediæval writers.

Page 199. I do not understand why Dr. Chaplin's statement as to the "Stone of Foundation" is called "quite a gratuitous conjecture." The Mishnah is regarded by M. Perrot as of considerable authority, and the Mishnah says distinctly that the Stone of Foundation was visible in the Holy of Holies of Herod's Temple. The passage, 1 Kings vi, 15, does not contradict this, since it refers to Solomon's Temple.

Page 208. M. Perrot seems to think that the central part of the east and west Haram walls may be as old as Solomon, but it appears certain that at least all the east wall is of one period to the Golden Gate. He also speaks of the north-east angle, apparently overlooking the fact that, as far as we know, there is no ancient corner at this point.

Page 211. The unpublished drawings of the Palace of Hyrcanus which I prepared in 1883 show that the style was not purely Greek. The central pillars had most remarkable capitals, more like Egyptian style than any other; but, as far as I know, unique.

Page 214. M. Perrot speaks of *three* ancient Gateways on the west Haram wall as now known, but including that of Tank, No. xxx, there are four.

Page 226. It is matter of opinion whether Ezekiel's description should be applied to Solomon's Temple. M. Perrot's plan is not unlike that in the Speaker's Commentary, but to me it seems doubtful if the Temple of Solomon had as many cloisters as that described by Ezekiel. The

Rabbinical writers certainly held that Ezekiel's Temple never existed, though in some particulars its plan was carried out by Herod.

Page 239. The Mishnah can hardly be said to be much later than Josephus, and seems to have founded its description on the accounts of eye-witnesses of the Herodian temple.

Page 273. The wall discovered by De Vogüé east of the Cathedral of the Holy Sepulchre cannot be considered as old as the Haram masonry. The stones are quite differently dressed, and the wall appears to have belonged to the Basilica of Constantine.

Page 277. I do not understand on what grounds M. Perrot refers drafted masonry to Solomon. We do not know of its use in Phœnicia before the Greek age, and it may have been introduced into Palestine during that age.

Page 284-5. It is much to be regretted, I think, that the fanciful restorations of Jewish tombs by Cassas should be reproduced. They resemble no known monument existing in Palestine, and seem to be entirely impossible.

Page 305-6. It would have been well perhaps to have referred to the discoveries of Lenormant as to the meaning and derivation of the word *Cherub*, which is purely Semitic, and has nothing probably to do with the Aryan Gryps.

Page 308. The coin attributed to Jaddua bears no name or date. It is usually thought to belong to the coinage of Simon the Hasmonean, and it is not known that Jaddua struck any coins.

Page 334. I am unable to trace any authority for the restoration of Solomon's brazen altar with steps, which were not allowed by the Law.

Page 340. Pierotti is not a very good authority to quote as to Hebron. There is no allusion to the account of the Hebron mosque as explored when the Royal Princes visited the same, when it was shown that there is a double chamber under the floor, not in two storeys, but on one level.

Page 349. The Tomb at Tibneh, once thought to be Joshua's, belongs, I should say, to the Greek period.

Page 350. The cornice of the so-called "Egyptian tomb" appears to have just the same profile as that of the tombs of Absalom and Zechariah. It should be noted also that a similar profile occurs on the inner side of the Hebron Haram wall at the top. It seems clear that this profile was in use among the Jews of the Herodian age, and is only remotely connected with Egypt.

Page 354. I venture to differ as to the supposed ancient Hebrew text on the same monument. I carefully examined the marks in question, and have copied them (see Jerusalem Volume of "Memoirs"). I do not think they are letters at all, nor does there seem any clear indication that the door has been made higher at a later period. I believe the monument in question to date about the Christian era.

Page 361. M. Guérin's views as to the supposed Tomb of the Maccabees were not supported by further exploration. The monument appears to be a Byzantine Christian building, as shown by M. Clermont-Ganneau.

Page 364. It is hardly possible to suppose the tombs south of Wâdy Rabâby to be very ancient, as a rule. Many are Christian, and one of the most important dates from the eighth century.

Page 378. M. Perrot does me the honour to reproduce seven of my drawings of dolmens, but he does not refer to the curious stone circles in Moab called *Hadr*, which are as important as the other rude stone monuments discovered by my party in 1881-2. It is also curious that in speaking of the ancient fortresses of Palestine, M. Perrot never once describes any of the Tells, which are among the most important of ancient remains in Palestine, some of which have been excavated by the Palestine Exploration Fund explorers, and a great many others described.

Page 383. It is perhaps doubtful if the great foundation stones under the walls of Justinian's fortress on Gerizim are the oldest remains on the summit. The sacred rock seems to me to be the really ancient centre on the mountain, resembling the "earth fast" stones which, like the dolmens, were altars among the Celts. The cup hollow in this rock is very remarkable. The Samaritans say it marks the site of the Laver of Joshua's Temple on the mountain, but it is perhaps an old libation hollow like many found in Syria and in Europe.

Page 407. The proposed restoration of the Temple and Palace of Solomon by Stade shows by its contour that foundations of 40 feet in depth would be required. This is due chiefly to the Temple being too far west, the Saklrah being made the site of the Altar. If as in my proposed restoration of Herod's Temple the Saklrah is placed in the Holy of Holies, it will be found that only 2 or 3 feet of foundation are required anywhere.

Page 409. M. Perrot says Solomon's throne "would hardly have been noticed" at Tyre, Babylon, Nineveh, or Memphis. Yet Sennacherib thought Hezekiah's ivory throne worthy of notice in his historical tablet.

Page 434. The sketch of the pottery goddess of Gezer from a drawing by C. F. T. Drake, has been idealised by the artist. It may be true that the pictures of the Palestine Exploration Fund Memoirs are "mediocre" compared with his beautiful sketches, but the first thing desirable in archaeological drawings is faithful representation. Mr. Drake's picture was faithful and complete.

Page 441. There is evidence in Phœnician inscriptions and in monumental town names that Chemosh was not exclusively a Moabite deity.

Page 450. The sketches of the Moabite pottery are slight. The Palestine Exploration Fund possesses a collection of water-colour drawings and photographs of them. I may be allowed to note that these objects were discovered or produced just at the time when I first went out to Palestine in 1872, and though I reported fully on them, I did not consider myself competent to pronounce on their character, since I had not that "long experience" with which M. Perrot has done me the honour to credit me. As to the Shapira MS., it was first denounced by Neubauer, then simultaneously (to a day) by M. Clermont-Ganneau and by myself. I do not even now feel certain that some genuine articles may not have given the idea

of the pottery figures to the forgers, and this view was held by others also.

Page 455. Mr. Baker Greene's view as to the meaning of the names Melek Safa and Melek Set seems to me very probable in face of the numerous inscriptions on which the name Melek, or Moloch, appears in conjunction with other names of deities. Set also we know to have been a name for a deity of Egypt and of the Hittites.

Page 460. The collections at No. 1, Adam Street, and at South Kensington, show that it was hardly the case that the English explorers "did not take the trouble" to collect ancient glass found in the excavations.

Page 465. The idea that the cartouche *Yutah Mâlek* represents the King of Judah, hardly agrees with the fact that it belongs to a purely geographical list, and has the determinative of place. It represents rather the town Jehud (el Yehûdiyeh).

Page 494. The discovery of a well-formed hare on the lion of Marash shows that I was right in supposing this hieroglyphic to have been used in the Syrian hieroglyphs. The Egyptian figure of the hare represents the rising sun.

Page 504. M. Perrot does not see "how Captain Conder can deny" that the Egyptian picture of Kadesh gives the idea of a lake. His own picture seems to show that the Lake of Kades (or Homs) cannot be intended. There are bridges over it from both sides, and if the site were in a lake at Tell el Baheirah, these would have been each $\frac{3}{4}$ -mile long. The Hittites might have tried to drive across the stream which surrounds the site where the name Kades is still found, as they are shown doing in the picture. They would not have tried to drive to a town a mile away in the water. The only reason adduced why Tell el Baheirah should be the site of Kadesh is the existence of the lake. I have shown that the lake was formed by building the Roman dam. The site where the ancient name is found is the proper site to examine. I do not think there is any indication that there was a town of importance on Tell el Baheirah, nor do I see any sound reason for supposing it to be the site of Kadesh.

In a note on p. 806, M. Perrot, however, is induced by M. Ary Renan to look more favourably on my view as to Kadesh. I do not think, however, it is correct to speak of the island in the lake as so very small, although it is absent from M. Perrot's reproduction of my sketch Survey of the Lake. The argument as to the lake being formed by the barrage I put forward in 1881, and published in "Heth and Moab." M. Perrot seems to have overlooked this and other arguments, which he attributes to M. Ary Renan, who visited the spot in 1886. It is surely a mistake to say that Robinson placed Kadesh on the Tell el Baheirah, for Robinson apparently knew nothing about Kadesh. He did not visit the lake, and he says he did not know why Abu el Feda called it Kedes ("Later Biblical Researches," p. 549).

A good deal that M. Perrot has written may perhaps be reconsidered in connection with the reading of the so-called Hittite texts.

C. R. C.

KIRJATH-JEARIM AND EBEN-EZER.

STUDENTS of the Great Map of Western Palestine being invited to send notes of any identifications which suggest themselves, I beg to report the following, noted this winter. The argument for the survey identification of Kiriath Iearim given at pp. 114, 115, of "Twenty-one Years' Work" (and in the "Memoirs") seems conclusive. One point, however, seems to have escaped notice, which may be held to settle the question. In Joshua xv, 60, one of the groups of cities pertaining to the tribe of Judah is given in these words, "Kiriath Baal, which is Kiriath Iearim, *and Rabbah*, two cities with their villages." Now within a mile of Khurbet 'Erma, on the same southern side of the main wâdy, but across a small side valley, the map gives another ruin of apparently equal size and importance, Khurbet *Rab'a*, "The ruin of Raba." Thus we find in close juxtaposition the two cities of Iearim and Rabbah, "two cities with their villages;" and that it is so proves the survey identification of Kiriath Iearim to be right. True, in the Hebrew, Rabbah is **ה רבה**, *Ha Rabah*, the mighty or the populous; while the modern Arabic name corresponds to a Hebrew form, **רבע**, *Rab'a*, a four-sided enclosure, whence the suggestion "arbour" or "summer-house" in the Name Lists, p. 309. This variation, however, meets a ready explanation in Professor Palmer's words in the Preface of Name Lists, which may be quoted in full, as a second application of them is presently to be made. Some Arabic topographical names, he says, are survivals of older Hebrew names, "either quite meaningless in Arabic, or having an Arabic form in which the original sound is perhaps more or less preserved, but the sense entirely lost. In some instances the modern local form represents the Hebrew with scarcely any change. In others, again, the older form has grown into an intelligible Arabic word, *similar in sound, but quite different in meaning.*" The second application of these words gives a like justification of the survey identification of Eben-ezer at Deir-Abân, a name which commemorates the "stone," but not the "help."

In the valley, at the foot of Deir Aban, the Map places *Bir ez Zer'a*, "the well of the sown corn" (Name Lists, p. 292). That no doubt would be in Hebrew **ה זרע**, the seed, or, the sown; while the monument given by Samuel (1 Sam. vii, 12) is designated *Eben ez 'Zer*, **ה עזר**, the stone of the help. Considering the quiescent nature of the letter **ע** the two words are, in sound, practically identical, and it may well be that in Deir *Abân* and *Bir ez Zer'a*, the complete name *Eben-ezer* has survived.

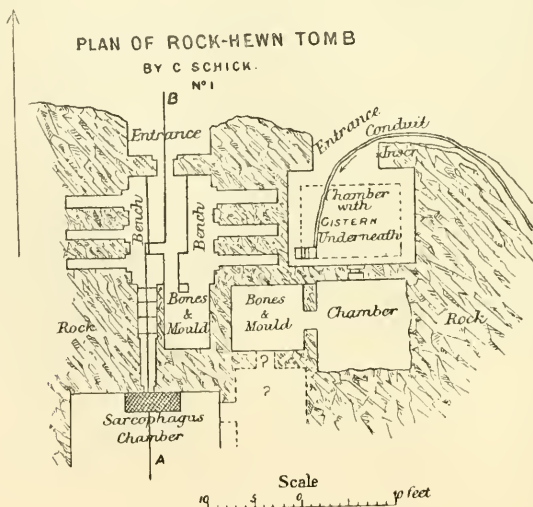
I anticipate that the Great Map will yield many similar corroborations of the conclusions of the Survey.

WALTER MILNER, B.A.

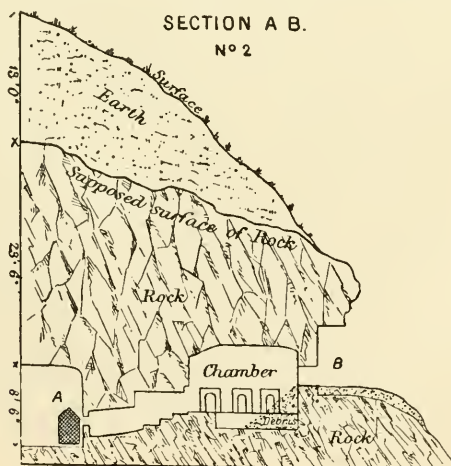
A REMARKABLE TOMB.

WHEN I was last autumn digging in order to discover, if possible, the first canal of Siloam, the workpeople told me that there were some interesting rock-hewn tombs, with a curious stone curve down the valley on its slope, about fifteen or twenty minutes' distant. I took little notice of the story, as they always speak in such terms about localities, and when one goes to visit them they are found to have no interest. But always when meeting me in town they repeated the same thing, so I resolved one day to go down with a few assistants and the necessary instruments for measuring, a level, with candles, &c. I was guided into the Wâdy Yasul marked on the large map. We passed Bir Eyub and 'Ain Lozeh, went over the foot of the hill, and entered into the Wâdy Yasul, coming down from the western height, east of the Bethlehem road; going up a few minutes in the same, and crossing, ascending on its southern slope about the third part of its height, there is a cliff of soft rock, and in it some rock-hewn tombs. The first (or eastern) has a cave-like opening, 7 feet wide, and more than a man's height, hewn in a square, formed like a gate; on its eastern shoulder is an inscription engraved. It is in Arabic: "There is no God but God, and Muhammed is the Apostle of God." Entering, one is in a square room (14 feet by 10 feet, and about 9 feet high), with straight walls and nearly horizontal (slightly arched) ceiling; in the south-west corner is, on the bottom, a hole, or well-mouth, with a few steps in it, so that one may be able to go down: it is about 5 feet (or more) deep, extending nearly under the whole bottom of the room, and a small water conduit comes down the brow of the hill, and entering under the door into the mouth of the well (see No. 1).

Opposite the entrance door, in the southern wall, is another small door,



with a recess to receive a closing slab, and, inside, marks of the hinges and the bolt of a once existing movable door, leading into another square room (9 feet 4 inches by 9 feet 10 inches). It seemed as if it had been at one time the lodging of a living man, and not a sepulchre for depositing dead bodies; near the bottom, on the east wall, there is in the middle a door-opening of another square room (about 7 feet by 7 feet), with a great mass of bones and mould: its ceiling is about 3 feet lower situated than that of the lodging room, also is its ceiling towards west declining downwards. It may be, as I suppose, that from it a door may lead to other rooms inside, as by pointed lines shown in the plan; but this is only supposition, and cannot be proved until the room is cleared. When coming out in the open air again, and going westwards, we come 11 feet from the large entrance to another one, partly destroyed, 9 feet wide and still about 4 feet deep, and of the height of a man. In the entrance are recesses outside to take up the closing stone slab, and entering, one comes to a square room, 9 feet wide by 11 feet 10 inches long, and in the middle 8 feet 6 inches high, the ceiling slightly arched, and the full height only in the centre part, as on three sides there is left a stone bench, $2\frac{1}{2}$ feet broad and 2 feet 2 inches high; level with its top are on these three sides loculi, or single tombs, three on each side. These loculi are 7 feet deep, 1 foot 8 inches wide, and 2 feet high, on the top rounded; in front of each is a square, 4 inches deep recesses to take up the closing slab. Towards the south, by having broken out the dividing wall, two are now connected and made one small room, 5 feet wide and 6 feet long, and the bottom lowered to the level of the bottom of main room, and a trench through the bench cut to it, so that the middle opening represents a door of 4 feet high; this inner and small room is full of bones and mould. The third (the western) opening on this side is rather a passage and not a tomb (or tomb behind tomb, as one thinks first), for the first part has three steps, and they themselves are a



little sloping. It has the width of the others, and is 5 feet 6 inches long, and is like another opening 2 feet high, and a little narrower, going in 5 feet, bottom and ceiling sloping down. Its end is a rock, but has a little hole, by which one can see that the wall is only $2\frac{1}{2}$ inches thick—whether broken accidentally when the passage was made or on purpose, I cannot say. What one sees when looking through the hole is the most important thing of all. There stands across before the thin rock wall a large smooth coffin-shaped stone (see No. 2). The hole and all is too narrow for a man to put in his arm, only his hand; but by a thin iron rod with hooks on both ends I could ascertain that the sarcophagus, if it is one, or rather its cover, is 6 feet long; the one side of the cover is 2 feet, and from the edge of that down to the bottom where it stands, 2 feet 10 inches, but it may be more, as there between the stone and the wall may have in the very narrow space accumulated some earth. Pushing the iron rod of 5 feet long to the right and left it touched no wall, nor the roof of the room in which the sarcophagus stands. It must be of some larger size. I have also to say that although I clearly saw the edge caused by the perpendicular side of the sarcophagus and its sloping top, I could not observe any joint, so, if there is one, it must be lower down than the hole permitted to see. All the work hewn in the rock described in the above is as nicely and correctly done as it is in rock tombs round about Jerusalem, except in the tombs of the kings.

The question now arises, Where is the access to this room with the sarcophagus, and in what way was it brought in? Once there was found a similar one in such a rock-hewn tomb room, with a little door, through which it could not have been brought in; I found a large hole in the top or roof of the room, and so it might be here. I levelled, therefore, and measured exactly, but the mass of rock and earth is so great that I hardly think it possible to get access to the room by digging a shaft down to it (see No. 2). So I think very probably the access might be through the lodging-room, as I have called it (see above), when all the bones and mould are taken out. It is curious that an extra passage was made to the hole, through which it might be seen, and one gets the idea that here was a kind of oracle. People came, perhaps, to the hole and asked their questions or uttered their prayers, and inside the inhabitant of the lodging-room might go secretly there and give answers. It may be that originally the first part of the passage was a common *loculus*, like the others. But later on, when some illustrious man was put there in a sarcophagus in the neighbouring room, it was found best to get an easy access, although still separated by a rock wall, to the holy relic, and the second part and the steps were then made.

In case it would be found interesting enough to ascertain more details of the stone and the mysterious room, I think by breaking off from the rock—*i.e.*, enlarging the hole upwards—it might be made very likely so wide that a man might go in and thoroughly search the room. It may be that there are even other tombs or sarcophagi, and at least found the place of entrance to it. Before I hear from you on this matter I will do nothing, as it is not a pleasant thing to disturb tombs. Yet by the suggested way there will be no disturbing.

The inscription, being Arabic, says nothing than the usual expressions of the Moslems, and the name of the Wâdy Yasul may derive from the man or Moslem Sheikh, once residing in these rooms, considered by his fellow believers to be a messenger or Apostle. The tombs and excavations are not Mohammedan, but Jewish, in later times only used by a Moslem ; and even this is now forgotten.

The water-pipes mentioned in 2 Sam. v 8, probably refer to a subterranean channel near the citadel of David, for we find in the Jerus. Talmud (Tractat Nasir, chap. ix, § 4), that such a channel existed close by the sepulchres of the kings, and terminated at the brook of Kedron. Jerome, in accordance with the rabbinical explanation, renders the clause, "et tetigisset domatum fistulas."

It is still a matter of speculation where the ancient City of David was situated, and whether the flight of steps in the rock discovered by the Anglican Bishop below the English cemetery are the remains of those mentioned by Nehem. iii, 15, as going down from the City of David. Supposing the ancient, like the modern, Zion was S.W., why does it say in Psalm xlviii, 2, "Mount Zion on the sides of the north?" Sir Charles Warren's and the Rev. John Forbes's theory, that Zion was identical with the northern hill, Acra, has some support by Josephus ("Ant.," xii and xiii), who calls the stronghold of Zion *ἀκρά*, and the Syrian fortress on Mount Zion is called Acra in the Maccabean books (1 Macc. iv, 60 ; i, 35 ; ii, 31). We meet again with Acra as a denomination of Zion in the very ancient Talmudic book, "Megillath Taanith," chap. ii (this book is sometimes quoted by the Talmud, and was compiled anterior to the time of Josephus). We may therefore venture to suggest that Zion was not an isolated fortress, but included a large part of the city. Yet the royal tombs were in the near vicinity of the Temple (Ezek. xliii, 7-9), and it appears from Nehem. iii, 16, that they were on the western side of it. Though the burial-place of the Kings of Judah (except Ahaz) was well known, until the destruction of the Temple (see Josephus, "Ant.," xvi, 7, § 1), yet according to the above-quoted Talmudical passage, Tractat Nasir, the sepulchres had been removed afterwards from the former burial-place, and the problem has now to be solved, where they are at the present time, and whether the now called David's sepulchre is the true one, or merely bears its name? The discovery of tombstones seems therefore to be a matter of the greatest archæological interest. There is a certain subterranean passage mentioned in the Talmud (Tract. Erubin, p. 61*b*), and in other ancient records, such as Midrash-rabbah and Midrash Taanumah (on Numb. iii), which was originally excavated by the King Zedekiah, leading from his royal palace northward towards Jericho. This passage is said to have been twelve miles in length, and was alluded to by Jeremiah (chap. xxxix, 4, and lii, 7), and it seems probable that the sepulchres of the kings had been removed from their former burial-place, which was west of the Temple, into the said passage in the north.

C. SCHICK.

JERUSALEM, *January 17th*, 1887.

MIDDOTH, OR THE MEASUREMENTS OF THE TEMPLE.

WITH THE COMMENTARY OF RABBI OBADIAH OF BARTENORA.

(Concluded.)

CHAPTER III.

1. THE altar was thirty-two cubits by thirty-two cubits.¹ It rose a cubit, and receded a cubit—this *was* the foundation ;² it was now thirty by thirty. It rose five cubits and receded a cubit—this *was* the circuit ; it was now twenty-eight by twenty-eight. The place of the horns *occupied* a cubit on either *side* ; it was now twenty-six by twenty-six. The place for the feet of the priests to walk³ *was* a cubit on either side ; it was now twenty-four by twenty-four—the place for the fire. Rabbi Jose said “at first⁴ it was only twenty-eight cubits by twenty-eight.” It rose and receded according to this measure, [*i.e.*, in the above-mentioned manner], until the

¹ They brought a square frame made of four boards, each of which was thirty-two cubits long. The breadth of *each* board was a cubit, and this was the height of the frame, and they filled it with stones, lime, pitch and melted lead, so that it became one solid mass of thirty-two cubits by thirty-two cubits, and a cubit high : and this was the foundation.

² It rose a cubit and receded a cubit. After the foundation had risen to the height of a cubit, another frame was brought, the length of each board of which was thirty cubits, and the breadth of the board which was the height of the frame, was five cubits. This they placed upon the foundation and filled with stones, lime, pitch, and lead, like the first, and it adhered to the foundation, and became one solid mass of thirty cubits by thirty cubits standing upon the foundation. This was called the circuit : it was five cubits higher than the foundation, and receded a cubit because it was shorter than the foundation a cubit on every side. And again a third frame was brought which was twenty-eight cubits by twenty-eight cubits, *and* three cubits high, and it was placed upon the circuit and filled like the first. This was the place for the pile, which was the top of the altar. Thus the foundation stood out from the circuit a cubit on every side, and the circuit stood out from the place for the pile a cubit on every side. Afterwards there was brought a frame of a cubit by a cubit, and in height a cubit, and placed upon the corners of the altar, and filled. And this was the horn of the altar, and thus for each of the four corners.

³ In order that it might not be necessary for the priests to go between the horns, they left a vacant space of a cubit inside the horns, upon which the feet of the priests might walk.

⁴ In the days of Solomon *the altar* measured only twenty-eight cubits by twenty-eight, and the receding and rising of the foundation and circuit and place of the horns, and place for the going of the feet of the priests were so that the place for the pile remained twenty by twenty.

place for the fire was twenty by twenty. And when the children of the captivity came up, they added to it four cubits on the south and four cubits on the west,⁵ like a gamma;⁶ as is said⁷ (Ezekiel xliii, 16), "and the altar, twelve *cubits* long, by twelve broad, square." It might appear that it was only twelve by twelve, *but* when it says "in the four squares thereof," it is taught that it measured from the middle twelve cubits to every side. And a red line encircled it in the middle,⁸ to distinguish between the upper bloods⁹ and the lower bloods.¹⁰ And the foundation extended all along the northern and western sides, and took up on the south one cubit, and on the east one cubit.¹¹

⁵ So that its foundation was thirty-two by thirty-two and the place for the pile twenty-four by twenty-four. We read "four cubits on the south, and four cubits on the west," and thus it is quoted in the sixth chapter of Zevachim (61*b*).

⁶ Like a *gamma*. The Greck *gimel*, which resembles our *nun* reversed. It is explained in the place just mentioned that on account of the *shitin* (which were the holes through which the drink-offerings ran down) they added so as to extend the altar to the south and to the west. For before in the days of Solomon, it was held that the "altar of earth" should be solid like the earth—that is, it should not be hollow; and when the drink-offerings were poured upon the top of the altar at the south-western corner they ran down from the altar upon the pavement and flowed into the cistern which was dug there near to the south-western corner close to the altar. It was not in the altar itself, but the children of the captivity added to the masonry of the altar, until this cistern was taken into the middle of the altar, and the holes at the top of the altar opened opposite to it, so that the drink-offerings might run down there. They used to say "the drink is like the food." As the food is consumed upon the altar (that is the offerings which are burnt upon the top of the altar), so also the drink (that is the drink-offerings) is swallowed by the altar. And the text "an altar of earth" is expounded that it be joined to the earth, that they should not build it upon arches or over cavities.

⁷ This is a verse from Ezekiel, who prophesied concerning the measurement of the second house [Temple] and of that which is to be in the future. "And the altar twelve:" the measures of the place for the pile are said to be twelve. "In the four squares thereof" teaches that from its middle he measured twelve cubits to every side: so it was twenty-four by twenty-four.

⁸ A red line was made round the altar at its middle, five cubits from the base, that is one cubit below the top of the circuit.

⁹ The blood of a sin-offering of a beast, and a burnt-offering of a fowl which was sprinkled above the red line.

¹⁰ The blood of all other offerings, which was sprinkled below the red line.

¹¹ The whole of the altar was in the portion of Benjamin except one cubit (along the south side and one cubit) along the east side which were included in the portion of Judah: but the cubit which was on the east did not extend along the whole eastern side, for when it reached the north-eastern horn, it was all included in the cubit belonging to the horn; and in like manner the cubit taken up on the south did not go all along the south, but when it reached the south-western horn, it was all close to the horn, a cubit. Thus, three corners of the

2. And at the south-western corner¹² there were two apertures like two narrow nostrils, by which the blood poured upon the western¹³ and southern¹⁴ foundations, might run down,¹⁵ and become mixed together in the canal, and pass out into the valley of Kedron.

3. Below, in the pavement at that corner,¹⁶ there was a place measuring a cubit by a cubit, and a slab of marble in which a ring was fixed, by which they went down to the foundation¹⁷ and cleansed it. And there was an incline¹⁸ to the south of the altar, thirty-two¹⁹ cubits long, by sixteen broad, and in it on the west was a cavity²⁰ in which were put the defiled sin-offerings of birds.²¹

4. Both the stones of the incline and the stones of the altar *were* from altar were in the portion of Benjamin, and the south-eastern corner alone in the portion of Judah: and as Jacob blessed Benjamin, saying, "Benjamin shall ravin as a wolf: in the morning he shall devour the prey" (Genesis xlix, 27), which is interpreted "in his possession the Sanctuary shall be built" [Targum of Onkelos], that which sanctifies the blood must be in no other than the portion of Benjamin, and on this account they did not make a foundation to the altar at the south-eastern corner, because it was not in the portion of the ravener, and the blood was not sprinkled below *the red line* at that corner. And when they made a square frame for the foundation to fill it with stones, pitch, and lead, as we have said, they put wood or some other substance in that south-eastern angle, in order that that angle should not be filled, and afterwards they removed the wood and that corner was left void without foundation. And on this account the middle part of the altar was called the circuit, because it entirely surrounded all the corners, which was not the case with the foundation.

¹² Below in the cubit of the foundation were two apertures.

¹³ As the remainder of the blood of the sin-offerings, the blood of which was sprinkled on the inner altar, after all the sprinklings was poured upon the western foundation.

¹⁴ The remainder of the blood of those sacrifices whose blood was sprinkled upon the outer altar.

¹⁵ Through those apertures and become mixed together in the canal for water which was in the Court, thence pass out into the valley of Kedron. And the gardeners bought it from the Gizbarim [or treasurers of the Temple] to manure the soil therewith.

¹⁶ The south-western.

¹⁷ To the hollow (or pit) which was under the altar opposite the place where drink-offerings were poured out.

¹⁸ Like a sloping bridge. It was made on the south, and by it they ascended and descended from the altar, for they might not ascend by steps because it is written (Exod. xx, 26) "thou shalt not go up by steps unto mine altar."

¹⁹ Its length was placed from south to north, and its breadth from east to west, sixteen cubits.

²⁰ Like a kind of hollow window, a cubit by a cubit. It was in the incline itself and placed on the western side. רבובה, *rabubahr*, is the same as נבובה, *nabubah*, as in the passage לוחות נבוב, "hollow with boards" (Exod. xxvii, 8).

²¹ Which remained there until they began to decompose and were afterwards taken out to the place of burning.

the valley Beth Kerem.²² They dug below the virgin earth,²³ and brought thence perfect stones upon which iron had not been lifted up. For iron defiles by its touch, and by a scratch, it defiles everything.²⁴ If one of the stones became scratched, it was unlawful, and all *the rest were* lawful. They whitened them²⁵ twice in a year, once at the Passover, and once at the Feast of Tabernacles, and the Temple once at the Passover. Rabbi Judah said²⁶ "every Sabbath eve they whitened them with a cloth on account of the blood." They did not plaster them with an iron trowel;²⁷ least it should touch and defile. For iron was created to shorten the days of man, and the altar was created to prolong the days of man: it may not be that what shortens be lifted up upon what prolongs.

5. And there were rings to the north of the altar,²⁸ six rows of four each (though some say, four *rows* of six each), upon which they slaughtered the holy sacrifices. The place of the slaughterers was to the north of the altar, and in it eight small pillars²⁹ with square planks of cedar wood³⁰ upon them, and iron hooks were fixed to them,³¹ three rows to each pillar,³² upon which they hung the beasts and skinned them upon the marble tables³³ which were between the pillars.

6. The laver was between the porch and the altar, drawn towards the south. Between the porch and the altar *were* twenty-two cubits, and twelve steps were there, the height of each step half a cubit, and the tread a cubit; a cubit, a cubit, and a landing three cubits; and a cubit, a cubit, and a landing three cubits; and the uppermost, a cubit, a cubit, and a

²² From the valley of Beth Kerem they brought them.

²³ Soil in which they had never before dug.

²⁴ Any scratch defiled the stones, even though not done by iron.

²⁵ They whitened them with lime twice a year.

²⁶ He does not dispute with the first doctor, but adds that on every Sabbath eve they wiped them with a cloth on account of the blood.

²⁷ He returns to the words of the first doctor, that when they whitened them with lime twice in a year they did not plaster them with trowels such as builders are accustomed to plaster with.

²⁸ Because they did not tie the two fore-feet of the continual sacrifices to each other, or the two hind-feet to each other (as we are taught in the treatise "Tamid" (ch. iv). Johanan the high priest caused twenty-four rings according to the twenty-four courses of the priesthood to be made. They were fixed in the pavement, and made like a bow, into which they introduced the neck of the beast at the time of slaughtering, and fixed the end of the ring in the ground. And they were on the north of the altar because the most holy sacrifices were slaughtered on the north.

²⁹ Low stone pillars.

³⁰ Square pieces of cedar wood were upon the pillars.

³¹ A kind of hook (*uncinus* in the barbarian tongue). They were fixed in those planks of cedar, and by them they suspended the beast.

³² There were three rows of hooks one above another to each piece to suspend therefrom the large or small beasts.

³³ Upon these they washed the inwards, because the marble made the flesh cold and preserved it from putrefication.

landing four cubits.³⁴ Rabbi Judah said the uppermost a cubit, a cubit, and a landing five cubits.³⁵

7. The doorway of the porch was forty cubits high, and twenty cubits broad. And five carved oak beams³⁶ were above it, the lower one³⁷ extended beyond the doorway a cubit on either side, the one above it, extended beyond it a cubit on either side, so that the uppermost was thirty cubits, and a row³⁸ of stones was between every two *beams*.

8. And beams of cedar were fixed from the wall of the temple to the wall of the porch, in order that it should not bulge.³⁹ And golden chains were fixed in the roof of the porch, by which the young priests used to get

³⁴ Thus we read "the height of each step half a cubit," &c., as Rabbi Barnch testifies, that he found in certain ancient corrected manuscripts. This is the explanation:—The height of each step was half a cubit. The tread, that is the breadth of the step, where the feet trod, was a cubit. The second and third step were each a cubit in the tread, that is, a cubit, a cubit, as is taught [in the Mishna] and a landing three. The fourth step was three cubits broad. A *robed* ["landing"] was a row of the pavement, as "surrounded by *robadin* or benches of stone;" on the fourth *robed* or row in the court," because the pavement was broad without steps. And on this account, it is not said, the tread three *cubits*, but the *robed* or landing, three *cubits*, which is as much as to say a row of the pavement. "A cubit, a cubit:" that is to say, the tread of the fifth and sixth steps was a cubit. "And the *robed*, or landing three;" the seventh step was three cubits broad. "The upper a cubit, a cubit, and the landing four;" the explanation is that the upper step which was that one of the twelve steps which came after four steps each of one cubit *in the tread*, that this upper step was four cubits broad to the porch. Thus all the steps were nineteen cubits from the first to the porch, and three cubits of the breadth of the pavement were unoccupied [חלקה, plane, smooth] from the altar to the commencement of the steps, making twenty-two cubits between the porch and the altar.

³⁵ Rabbi Judah said, the uppermost landing was five cubits to the porch, because he thought that the steps commenced at a distance of two cubits from the altar.

³⁶ Figured and painted beams of *melah*, of oak upon which galls, which are called *melin* grow. Thus in Gittin (19a) it is considered whether it was lawful to write a bill of divorce with the *melin*, water in which galls have been steeped.

³⁷ The lower beam rested horizontally upon the lintel of the doorway, which was twenty cubits broad, and the beam projected beyond the doorway a cubit on either side, so that its length was twenty-two cubits; and the second beam which was above it projected beyond the first on either side, so that its length was twenty-four *cubits* and the third twenty-six *cubits*, and the fourth twenty-eight *cubits*, and the fifth thirty cubits.

³⁸ *Nidbakh*, a row (as in Ezra vi, 4, "three rows of great stones") between each two. These five beams did not touch one another, but a row of stone masonry was between them.

³⁹ In order that the walls should not lean so as to fall on account of their *great* height, these beams, which extended from one wall to the other, rested upon the two walls so that they should not fall.

up and see the crowns,⁴⁰ as is said (Zech. vi, 14), “and the crowns shall be to Helim, and to Tobijah, and to Jediaah, and to Hen the son of Zephaniah for a memorial in the Temple of the Lord.” A golden vine was placed at the doorway of the Temple, and supported upon poles, and whoever made a freewill offering⁴¹ of a leaf, a berry or a branch, brought and hung it to this *vine*. Rabbi Eleazer, the son of Zadok, it happened once that three hundred priests⁴² were employed *in removing it*.”

CHAPTER IV.

1. THE doorway of the Temple was twenty cubits high and ten broad, and it had four doors, two within and two without,¹ as is said (Ezekiel xli, 23) “the Temple and the Sanctuary had two doors.” The outer ones opened to the interior of the doorway to cover the thickness of the wall, and the inner ones opened into the interior of the house to cover *the space* behind the doors, for all the house was overlaid with gold, except behind the doors. Rabbi Judah said: “they were placed within the doorway, and were a sort of folding doors,² which turned back upon

⁴⁰ Which were in the windows of the Temple.

⁴¹ Of gold, for the Temple, and desired that the gold thus offered should itself be put upon the Temple so that it might all be covered with gold. Of that gold which was offered, there was made according to its value a berry, or a leaf or a cluster, and hung upon the vine.

⁴² In consequence of the great weight of the gold which was upon it, three hundred priests were necessary to move it and carry it from place to place. This is one of the places in which the wise men have spoken the language of hyperbole, for there were not really three hundred priests *employed for this purpose*. All that Rabbi Eliezer, the son of Zadok, intended was to make known that a great quantity of gold was offered there.

¹ Two within : in the thickness of the wall towards the inner side. Two without : in the thickness of the wall towards the outer side. The thickness of the wall of the Temple was six cubits, and at the end of the outer cubit of the thickness of the wall were the two outer doors, one on the right of the doorway, and one on the left, each of the doors being five cubits broad. When closed they touched one another and shut the doorway, the breadth of which was ten cubits; and when opened towards the inside they covered five cubits of the thickness of the wall. And two other doors of the same size were fixed at the inner side of the thickness of the wall, and when opened covered five cubits on one side, and five cubits on the other side of the breadth of the wall of the Temple within; and there the wall was not overlaid with gold like the rest of the house, because it was not seen.

² Boards of two pieces connected by means of joints; when opened they could if desired be folded back, one upon the other. Thus all these doors, both those which were within and those which were without, were connected by means of joints. And both the doors within and those without were fixed at the end of half a cubit of the thickness of the wall, and five cubits of the thickness of the wall intervened between the outer and the inner doors. Each door was five cubits *broad*, formed of two boards, each two cubits and a half, joined together.

themselves ; these, two cubits and a half, and those, two cubits and a half, and the door-post *was* half a cubit *broad* on this side, and the doorpost half a cubit *broad* on that side," as is said (Ezekiel xl, 24) "and the doors had two leaves *apiece*, two turning leaves, two *leaves* for the one door, and two leaves for the other *door*."³

2. And there were two little doors⁴ to the great gate, one on the north, and one on the south. No one ever entered by that on the south. And it is of this gate that Ezekiel explains as is said (Ezekiel xlv, 2) "then said the Lord unto me: This gate shall be shut, it shall not be opened, and no man shall enter in by it, because the Lord, the God of Israel, hath entered in by it, therefore it shall be shut." He took the key and opened the little door and went into the chamber,⁵ and from the chamber into the Temple. Rabbi Judah said, "he went into the thickness of the wall,"⁶ until he found himself standing between the two gates, when he opened the outer one from within and the inner one from without.

3. And thirty-eight chambers⁷ were there, fifteen on the north,⁸ fifteen

And when the outer door was opened towards the inside one half of it was folded back upon the other half, and covered two cubits and a half of the thickness of the wall, and in like manner the inner door, when it was opened towards the outside, was also folded back and covered the remaining two cubits and a half of thickness of the wall. [The word which I have rendered "folding doors" is **אֶצְטְרֵמֵטָא**, *etstremeta*. It appears to be from the Greek *εστρεφω*, to turn back. In some copies, and in other passages, it occurs as **אֶצְטְרִפּוֹמֵטָא** and **אֶצְטְרוֹמֵטָא**, V. Buxtorf, and Aruch. S. V. Rabbi Lipsitz's note on the passage is, "It is meant to say that each door was made of two pieces connected together by joints].

² So that each door was divided into two.

⁴ Two little doors, one on the right of the great gate of the Temple and one on its left, at some distance from the gate. Of that on the south it is written, "it shall be shut, it shall not be opened," in the Temple of the future, and certainly thus it was in the eternal house [the second Temple].

⁵ This was that chamber which opened into the Temple, and from the chamber he entered into the Temple and went along the Temple as far as the great gate which was at the end of the thickness of the wall within and opened it. He then came to the second gate which was at the end of the thickness of the wall without, and stood within and opened it.

⁶ Because he thought that he did not enter from the chamber into the Temple, but from the chamber went in the thickness of the wall of the Temple, until he found himself standing between the two gates, and opened the doors of the outer gate from within and the doors of the inner gate from without.

⁷ *Taim* = *lishkoth*, chambers.

⁸ Below where it is reckoned that from the north to south is seventy cubits, it is taught : " the wall of the gallery five, and the gallery three ; the wall of the chamber five, and the chamber six ; and the wall of the Temple six ; " and that the corresponding measurements on the south were similar. And it is not meant that the thickness of the wall of the gallery, and the thickness of the wall of the chamber, and the thickness of the wall of the Temple which was on the northern side was thus, but that the thickness of the wall, with the cavity

on the south and eight on the west. Those on the north, and those on the south, *were* five above five, and five above them ; and those on the west, three above three and two above them. And there were three openings to each, one to the chamber on the right, and one to the chamber on the left, and one to the chamber above it. And at the north-eastern corner, there were five openings ; one to the chamber on the right, and one to the chamber above it, and one to the gallery and one to the little door,⁹ and one to the Temple.

4. The lower row of chambers was five cubits broad¹⁰ and the roof six : the middle six cubits and the roof seven, and the upper seven, as is said (1 Kings vi, 6) "the nethermost chamber *was* five cubits broad, and the middle *was* six cubits broad, and the third *was* seven cubits broad."

which was between it and the second wall was reckoned. And in the five of the wall of the gallery, and three of the gallery, and five of the wall of the chamber, and six of the chamber, and six of the wall of the Temple, in each one of these five there was a chamber which was the **חַת**, *tha*, so that there were five chambers on the north and also on the south. And over these five were built other five, and five more on the top of them, so that there were fifteen chambers to the north and fifteen to the south. And in like manner on the west, as is reckoned below in its place, the wall of the Temple six, and the chamber six, and the wall of the chamber five, and in every one of these was a chamber, so that the wall was not six cubits thick, but the wall with the chamber that was in it was six, and the single chamber that was outside it was six, and the wall of the one chamber which was outside of them with the chamber which was in it was five, behold three chambers. And three other chambers were built above these three, and two above them, behold, eight chambers to the west.

⁹ The chamber in which was the northern little door, because by that chamber they entered into the Temple. The teaching is according to the rabbis, as it is said above, the priest "entered to the chamber, and from the chamber to the Temple," and not according to Rabbi Judah, who said "he went in the thickness of the wall."

¹⁰ On the outside of the wall of the gallery, which was the outer wall of the holy place (**הַקֹּדֶשׁ**) were chambers (**יְצִיעִים**), *i.e.*, additional rooms (**גִּזְזוּטָאוֹת**) surrounding the house on three sides, west, north, and south ; and these chambers (**יְצִיעִים**) were lower, second, and third. The lower chamber was five cubits broad, and the *robad*, **רֹבֵד**, or pavement, that was above it, that is the roof of the lower chamber, which was the floor of the middle chamber, was six cubits broad, because the wall of the gallery became narrower as it ascended, and when it reached the pavement, which was above the lower chamber, it receded one cubit, and upon the projection thus formed were placed the rafters of the chamber, so that the middle chamber was broader by one cubit than the lower chamber, namely, by that cubit which the wall receded. And again, when it reached the pavement which was above the middle chamber, which was the floor of the third, the wall became narrower and receded one cubit, so that the ends of the rafters could rest upon that cubit by which the wall of the middle chamber projected outwards [towards the interior of the chamber] beyond that

5. And a gallery¹¹ [or winding way] ascended from the north-eastern corner to the north-western corner, by which they went up to the roofs of the chambers. *He* went up by the gallery with his face to the west, *and* traversed the whole northern side until he reached the west; having reached the west, he turned his face to the south, and traversed the whole western side until he reached the south; having reached the south, he turned his face to the east, and went along on the south until he reached the door of the upper story, for the door of the upper story opened to the south. And at the door of the upper story were two beams of cedar, by which they went up to the roof of the upper story. And in the upper story pointed pieces of wood distinguished between the holy *place* and the most holy. And holes¹² opened in the upper story to the most holy place by which they let down the workmen in boxes,¹³ in order that they might not feast their eyes¹⁴ upon the most holy place.

6. The temple was a hundred *cubits* by a hundred,¹⁵ by a height of a hundred. The solid foundation¹⁶ six cubits, and its height forty; a cubit the ornamental ceiling;¹⁷ two cubits the place of dropping;¹⁸ a cubit of the upper chamber, and thus the upper chamber was one cubit broader than the middle, and two cubits broader than the lower chamber. And this is what is said in 1 Kings vi, 6, "for without in *the wall of the house* he made narrowed rests, כִּנְרֵנוֹת that *the beams* should not be fastened in the walls of the house;" that is to say, that the wall was narrowed and wanted one cubit in thickness on the outer side in the pavement of the middle chamber, and still another cubit in the pavement of the upper one, in order that there might be place to put the ends of the rafters of the pavement upon, so that it might not be necessary to fasten them in the walls of the house, to make holes in the wall, and fix there the ends of the beams.

¹¹ A kind of hollow way by which they went up to the roofs of the chambers. And because a person going up by it made a circuit in going up, and again in going down, it was called מִסְבֵּה, or winding way.

¹² Windows such as are made in the roofs of upper rooms.

¹³ They lowered them in the inside of the boxes by means of a rope.

¹⁴ By seeing the most holy place; but might only do what was necessary, and go up again.

¹⁵ A hundred long and a hundred broad.

¹⁶ Solid and closed masonry to form a foundation for the house, upon which they erected the walls.

¹⁷ The lower rafter of the roof was one cubit thick, and because it was overlaid with gold and painted with beautiful pictures, it was called כִּיּוֹר, *kioor*, i.e., ornamented.

¹⁸ The thickness of the upper rafters, which rested upon the lower rafter, was two cubits, and they were called בֵּית דִּלְפָּא, *beth dilpa*, because the planks of the roof were joined together by their means. The interpretation is *of joining*, בֵּית לֹפִי, *beth lofi*, the place of joining. And it need not be wondered why the lower rafters, upon which everything rested, should be only one cubit thick, and the upper rafters which had to bear no weight at all were two cubits thick, because the lower rafter, in consequence of being broader than its thickness of a cubit, was strong and able to support the building above it. But the upper

the rafters of the roof,¹⁹ and a cubit the plaster.²⁰ And the height of the upper story was forty cubits, and a cubit the ornamented ceiling; two cubits the place of dropping, a cubit the rafters of the roof, and a cubit the plaster; and three cubits the parapet and a cubit the scarecrow.²¹ Rabbi Judah said, "the scarecrow was not reckoned in the measurement, but the parapet was four cubits."

7. From east to west one hundred cubits. The wall of the porch²² five, and the porch eleven; the wall of the temple six, and its interior forty cubits; the partition²³ space a cubit, and twenty cubits the holy of holies; the wall of the temple six,²⁴ the chamber six, and the wall of the chamber five. From north to south seventy cubits. The wall of the gallery five, and the gallery three; the wall of the chamber five, and the chamber six; the wall of the Temple six, and its interior twenty cubits; the wall of the Temple six,²⁵ and the chamber six; the wall of the chamber six, the place rafters which were not broader than a hand-breadth, or less, had to be made thicker; or the upper rafters were two cubits thick in order to render the roof distant from the lower rafter, because this was painted with beautiful figures, and if the roof had been close to it, the figures would have been entirely unseen and unobserved.

¹⁹ תקרה. The planks which were laid upon the beams were one cubit in thickness.

²⁰ The mud, and stones, and lime which were put over the planks.

²¹ כלה עורב. A sharp plate of iron, like a sword, the height of which was a cubit, was placed on the top of the parapet in order that the birds might not rest upon it, and hence it was called כלה עורב, *challeh oreb*, crow destroyers, because the crows were destroyed by its means.

²² The thickness of the wall of the porch on the eastern side was five cubits and that of the wall of the Temple on the eastern side six cubits.

²³ The cavity (or internal space) of the Temple was forty cubits *long from east to west*.

²⁴ The wall which separated between the Temple and the holy of holies was called *tirkisin*, because it shut up the ark and tables of the law which were given at Sinai, טרק, *trak* in the Aramaic tongue, means *shut*, as טריקי גלי, *shut the door*. *Sin* is Sinai. And the thickness of that wall was a cubit. The wise men could not decide whether its holiness was as the holiness of the interior, or as the holiness of the exterior, and therefore they made in the second house two vails, an outer one and an inner one, and between them a space of a cubit to receive between them the space of the place of the wall, which was one cubit thick [in Solomon's Temple].

²⁵ We have already explained above that it was not the wall of the Temple which was on the western side that was six cubits in thickness, but the thickness of the wall of the Temple with the void place which was between it and the second wall which was external to it was six cubits; and the thickness of the second wall, which is called "chamber," with the void place which was between it and the third wall, six cubits; and the thickness of the third wall, which was called the "wall of the chamber" with the void place which was between it and the fourth outer wall was five cubits, and the three void places which were between the four walls were the *taim* chambers, and over them were other chambers, as we are

for the descent of the water three cubits, and the wall five cubits. The porch extended beyond it fifteen cubits on the north,²⁶ and fifteen cubits on the south, and this was called the house of the slaughtering knives,²⁷ because there they kept the knives. The Temple was narrow behind²⁸ and broad in front, and it resembled a lion, as it is said (Isaiah xxix, i), "Woe to Ariel, the city *where* David dwelt." As a lion is narrow behind and broad in front, so the Temple was narrow behind and broad in front.

CHAPTER V.

1. THE whole court¹ was one hundred and eighty-seven cubits long² by one hundred and thirty-five broad.³ From east to west one hundred and eighty-seven: the place for the tread of Israel⁴ [*the laity*] eleven cubits; the place for the tread of the priests⁵ eleven cubits; the altar thirty-two;⁶ between the porch and the altar twenty-two cubits; the temple a hundred cubits;⁷ and eleven cubits behind the house of atonement.⁸

2. From north to south one hundred and thirty-five. The incline and the altar sixty-two; from the altar to the rings eight cubits; the place of the rings twenty-four; from the rings to the tables, four; from the tables to the pillars, four; from the pillars to the wall of the court, eight taught above, "on the west three, above three, and two above them," and likewise "from north to south the wall of the gallery five," &c., all include the hollow space which was between wall and wall. The whole is as I have explained above.

²⁶ The wall of the porch was five cubits thick, and the porch *itself measured* ten cubits on the north, and likewise on the south.

²⁷ Because of the knives which were deposited there it was called the place of slaughtering knives. In the Roman tongue, also, large knives are called *chalpin* [*? scalpellum, scalper ?*].

²⁸ Narrow behind on the western side, and broad in front on the eastern side. It is not clear to me how this should be, for "a hundred by a hundred" is symmetrical.

¹ The whole circuit of the court, within which circuit was built the house on its western side, the court and the altar being on its eastern side.

² From east to west.

³ From north to south.

⁴ This is what was called the court of Israel.

⁵ Called the court of priests.

⁶ Explained above at the beginning of Chapter III.

⁷ The thickness of the wall of the porch and the interior of the porch, and the thickness of the wall of the Temple and its interior, and a cubit the partition, and the interior of the holy of holies and the wall of the temple on the west; and the chamber, and the wall of the chamber, altogether were a hundred cubits, as is explained in its chapter above.

⁸ From the outer wall of the Temple on the western side to the western wall of the court eleven cubits, including the unoccupied space with the thickness of the wall, was called "behind the house of atonement."

cubits; and the remainder between the incline and the wall, and the place of the pillars.

3. There were six chambers in the court, three on the north, and three on the south. Those on the north *were* the chamber of salt, the chamber of Parvah,⁹ and the chamber of the washings. In the chamber of salt they put salt for the offering. In the chamber of Parvah they salted the sacred skins, and on its roof was the place of bathing for the high priest on the day of atonement.¹⁰ The chamber of washings *was so called because* there they washed the inwards of the holy *sacrifices* and a winding stair¹¹ went up from it to the roof of the house of Parvah.

4. Those on the south *were* the chamber of wood, the chamber of the captivity¹² [or of the draw-well], and the chamber Gazith. The chamber of wood, Rabbi Eliezer, the son of Jacob, said, "I forget for what it served." Aba Shaul said, "*it was* the chamber of the high priest,¹³ and it was behind the *other* two, and the roof of the three was even.¹⁴ The chamber of the draw-well. There the בור הגולה, the draw-well, was placed, and the wheel put over it, and from thence water was supplied to the whole court. The chamber Gazith; there the great Sanhedrim of Israel sat,¹⁵ and judged the priesthood. And the priest in whom was found

⁹ A certain wizard whose name was Parvah built this chamber by means of witchcraft, and it was called after his name. Thus I find. And Rambam has written that he made a hole in the wall in order to see how the high priest performed his function, and that he was killed there.

¹⁰ The five immersions which the high priest had to undergo on the day of atonement when changing from golden garments to white and from white to golden, were all upon the roof of the house of Parvah, because it was hallowed with the same degree of holiness as the court, and the immersions which were on account of the day of atonement were required to be in the holy place (as is written (Levit. xvi, 24), "and he shall wash his flesh with water in the holy place"), except the first immersion, which was not on account of the day of atonement [but was the ordinary immersion required of every priest before going into the court]. And also on all other days of the year no clean person might enter the court until he had been immersed, and hence the first immersion was in the profane part [of the Temple] over the water gate. This was the third gate on the south, and a fountain of water was conveyed there by means of a conduit which came from the fountain Etham, and there the first immersion took place.

¹¹ Stone masonry turning and winding stairs to go up to the roof of the house of Parvah by a winding way.

¹² So called from a well which they who came up from the captivity [in Babylon] dug there.

¹³ This was the chamber of wood; it was the chamber Parhedrin, as we are taught in the beginning of the treatise Yoma: "seven days before the day of atonement they removed the high priest from his house to the chamber Parhedrin."

¹⁴ There was one roof to the three.

¹⁵ In the unhallowed side of it, for the chamber Gazith was half in the holy, and half in the profane *part of the Temple*, and in the half which was in the holy

any disqualification *was* clothed in black and veiled in black, and went out and departed. And he in whom no disqualification was found, clothed in white, and veiled in white, entered and served with his brethren, the priests. And they made a festival, because no disqualification was found in the seed of Aaron the priest. And thus they said, "Blessed be the place [*i.e.* God], blessed be he that no disqualification was found in the seed of Aaron. And blessed be He who chose Aaron and his sons, to stand and serve before Jehovah in the House of the Holy of Holies."

part, it was not possible for the Sanhedrin to sit, because there was no *right of* sitting in the court for any but kings of the house of David only, as is written (2 Sam. vii, 18), "then went King David in and sat before the Lord."

THE PALESTINE EXPLORATION FUND

NOTES AND NEWS.

WE are happy to announce that Herr Schumacher has been instructed to proceed to Sidon there to confer with Hamdi Bey, Director of the Imperial Museum of Constantinople, for the safe removal of the sarcophagi recently found near Sidon, of which a preliminary account was given in the April *Quarterly Statement*. It is hoped that this Society will receive copies of his measurements, drawings, and photographs, with a full description of the tombs and sarcophagi in time for the October *Quarterly Statement*.

The Annual Meeting of the General Committee was held on Tuesday, June 14th. The full Report of the meeting will be published in the October *Quarterly Statement*. The Executive Committee duly resigned their office and were re-elected. Their Report for the year was received and adopted. A few additions were made to the General Committee. The first work of the Executive for the year 1887-88 will be to make certain changes in the management of the office.

It is not desirable, however, to withhold one recommendation made at this meeting by the Executive Committee. It is to the effect that the *Quarterly Statement*, which is the most important means of keeping up the interest in our work, shall be made, if possible, more interesting, and shall contain as much as can be afforded of the results of the Society. With this view, it has been ordered that Herr Schumacher's "Jaulan," translated from the Zeitschrift of the German Society, and his Ajlûn Memoirs, shall both be published in the *Quarterly Statement*, and in type and size of page which shall enable the subscribers to detach and bind them up in separate volumes. These Memoirs are illustrated by hundreds of drawings and plans. The publication will begin in October.

Captain Conder's promised work on the reading of the Hittite inscriptions has now appeared. There has ensued a great deal of controversy, as might have been expected. Captain Conder defends his position in the new edition, and has a note upon his aggressors in this number of the *Quarterly Statement*. Of course, it is well understood that, while the Committee are naturally anxious that their officer and chief surveyor for so many years, to whom the Society owes so much, should have every opportunity of gaining publicity for his

views, they express no opinion by opening their pages to his advocacy any more than they accept the views of any other writer in their pages.

Many readers of the *Quarterly Statement* have asked why the long series of translations from the Hebrew are continued in the Journal. Dr. Chaplin has kindly furnished a reply to this question, which will show the great value of these papers, and their bearing upon the problems which concern the supporters of this Society.

The "Memoirs of Twenty-One Years' Work" is now in its third thousand. *Subscribers are earnestly requested to use this book as a means of showing what the work has been, and what remains to be done.* Copies are given to every subscriber who wishes to have one, and additional copies can be procured at a great reduction in the price, *by subscribers only*, by writing to the central office.

The Palestine Pilgrims' Text Society are issuing for the current year the following works—

1. The Bordeaux Pilgrim (ready).
2. Areulfus de Locis Sanctis (in the autumn).
3. La Citez de Jerusalem (in the autumn).
4. The Travels of the Russian Abbot Daniel (ready in July).

The works already issued are—

1. Antoninus Martyr.
2. Sancta Paula.
3. Procopius.
4. El Mukaddasi.
5. The Bordeaux Pilgrim.

The subscription is one guinea. New members can have copies of works published in previous years at a reduced rate. Members are requested to forward their subscriptions to the Hon. Secretary without being reminded.

Will all the subscribers to the Palestine Fund remember—(1) that it helps the Committee very much if subscriptions are paid early in the year? (2) Next, that it saves a great deal of trouble if they are paid to Coutts & Co. direct by a Banker's order? and (3) That whenever they are due it saves a great deal of labour if they are paid without waiting for a reminder? The clerical staff of the Society is small, and it is greatly desired not to increase the management expenses, and not to overburden the work of the office.

The following books are now published uniform in size and appearance:—Conder's "Tent Work"; Conder's "Heth and Moab"; Sehumacher's "Across the Jordan"; "The Memoirs of Twenty-One Years' Work"; Conder's "Syrian Stone Lore." Subscribers can have the whole set, together with Hull's "Mount Seir," for 25s. carriage free.

The long-promised List of Old Testament Names is nearly ready. Mr. Armstrong has also prepared a new list of photographs arranged alphabetically according to those Bible names which are illustrated by photographs. This list is now ready. Those who wish for a copy of either may send in their names.

Mr. G. E. Stewardson, Assistant-Secretary of the British Association, has completed the great Index for the "Survey of Western Palestine." It is hoped to get this ready very shortly. A circular on the subject will be sent to every one who possesses the great work of the Society.

The income of the Society, from March 30th to June 14th, 1887, inclusive, was—from subscriptions and donations, £150 18s. 11d.; from all sources, £620 15s. 7d. The expenditure during the same period was £731 5s. 11d., viz.: on Exploration, £100 0s. 0d.; on Publications, £464 2s. 1d.; on Office, £117 3s. 0d.; and on Reduction of Debt, £50. On June 14th the balance in the Banks was £227 18s. 7d.

Subscribers who do not receive the *Quarterly Statement* regularly, are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

The only authorised lecturers for the Society are—

- (1) The Rev. Henry Geary, Vicar of St. Thomas's, Portman Square. His lectures are on the following subjects:—

The Survey of Western Palestine, as illustrating Bible History.

Palestine East of the Jordan.

The Jerusalem Excavations.

A Restoration of Ancient Jerusalem. Illustrated by original photographs shown as "dissolving views."

- (2) The Rev. James King, Vicar of St. Mary's, Berwick. His subjects are as follows:—

The Survey of Western Palestine.

Jerusalem.

The Hittites.

The Moabite Stone and other monuments.

- (3) The Rev. James Neil, formerly Incumbent of Christ Church, Jerusalem.

- (4) Mr. George St. Clair, F.G.S., has returned from his Eastern tour, and is prepared to give Lectures for the Society in a parts of Great Britain. His subjects for the autumn will be—

(1) *The Buried City of Jerusalem*, and General Exploration of the Holy Land. Numerous diagrams.

(2) *Buried Cities of the East*. Numerous diagrams.

(3) *Sight-seeing in Palestine*. Lantern views, where local help can be obtained.

Address: G. St. Clair, Bristol Road, Birmingham; or at the Office of the Fund.

TRANSLATIONS OF THE MIDDOTH, &c.

THE translations of Hebrew descriptions of the Temple, which have been printed in the *Quarterly Statements*, were commenced some years ago with the object of clearing up, if possible, some obscurities in the then existing translations of the treatise "Middoth." The task did not prove a difficult one, and whilst I was engaged in it the idea occurred to me that it might be both interesting and useful to put into English all that the Jewish authorities have handed down upon the subject. This rather formidable undertaking for one leading a busy and anxious life, and shut off from many helps and sources of information, became the solace and amusement of my spare half hours, and as the labour progressed I soon began to perceive how extremely valuable these Hebrew traditions are in the endeavour to form a just estimate of the plan and structure of the second Temple. My attention was first turned to the "Beth Habbechereh" of Maimonides, which is a digest of Jewish teaching, as to the construction of the "Chosen House." From its skilful arrangement and lucidity of statement this work is every way worthy of its distinguished author, and one important advantage which I derived from the study of it was that it made me acquainted not only with the several Mishnas in which various parts of the Temple are described, but also with many scattered passages referring to the subject in the Gamara of both the Babylon and Jerusalem Talmuds, in Sifrè, Mechilta, the Toseftas, and other Jewish writings. In every instance I have myself verified his quotations from these sources, and indicated them in the notes appended to the translation.

The comment of Rabbi Obadiah of Bartenora on the Mishnas is highly esteemed for its brevity and perspicuity, and being merely explanatory, seemed to me of great value for my purpose of enabling the English reader to understand the text, especially some passages the conciseness of which gives rise to obscurity, and I have therefore translated it.

It had been my desire to append to these translations, if they were ever printed, a short description of the Temple drawn exclusively from Hebrew sources, and I had already commenced this task when ill health—and other pressing occupations—which took me away from my books, caused me to abandon it. This is not much to be regretted, because every reader interested in the subject may readily construct for himself an almost complete model of the Herodian Temple by keeping strictly to the descriptions of the Rabbis, and avoiding that stumbling-block of so many investigators, the desire to reconcile the account of Josephus with that of the Talmudic doctors. The historian, who probably never had a very intimate knowledge of the inner Temple, wrote at a distance from the spot, after the building was destroyed, and without those aids which

enabled the Rabbis, who fought out, as it were, in their discussions every handbreadth of measurement and every detail of structure, to furnish an accurate account of almost every part of the holy and beloved house, around which so many hallowed memories clung.

The neglect with which these carefully-guarded traditions have been treated is one of the curiosities of literature. Even after scholars like Lightfoot had spent years in arranging and commenting on them, they were still regarded as of little worth. In endeavouring to estimate their real value, a careful distinction must be made between the statements of the Mishnas and those of the Gamara, the latter being for the most part rather opinions than reliable traditions, except in so far as they are a repetition of passages from the Mishnas themselves. The commentaries of the later Rabbis have still less authority, and however valuable as aids to a true understanding of the ancient records, must not be received as anything more than the personal views of the writers. It is certain that Maimonides himself misunderstood the account of the Temple steps; Rashi also has shown that he could stumble; and the only sure guide to a proper understanding of the Temple, as it stood in the time of our Lord, is the text of the Mishnas carefully studied and interpreted without bias from preconceived opinions.

Two points which have been often in dispute may be considered as settled if the authority of these ancient writings is recognised. One is that the rock under the existing Dome of the Rock marks the site of the Holy of Holies, and the other that the roof of the Temple was flat and constructed in a manner exactly similar to those of many houses at Damascus at the present day.

THOMAS CHAPLIN, M.D.

18, *Anerley Park, S.E.*,
April 28th, 1887.

THE HITTITES.

THE criticism of "Altaic Hieroglyphs" is very encouraging. So much has met with approval that there is every chance of more progress being made in time.

1st. It is admitted that the language of the texts is agglutinative. Professor Sayce approves the idea of "packets," but I cannot find this idea in previous writings. It will perhaps be admitted that it is therefore wrong to look for the verb at the beginning of inscriptions.

2nd. There is a disposition to think that the language is Altaic. I have ventured to hold this view for three years. The comparison with

Georgian has as yet led to no result, Georgian being an inflexional language not agglutinative.

3rd. Only one Cypriote comparison is challenged out of thirty, viz. : *Zu*. It is by no means certain that this should be read *Nos* as *Nos* has another shape. The emblem in question is not controlled by a bilingual. I am reproached with a sudden conversion to the Cypriote, but the reason for my previous scepticism was that I thought five out of the eight comparisons previously put forward doubtful, whereas I have now found thirty comparisons which I think are more closely similar.

4th. Nothing has been said as yet against the cuneiform comparison ; and indeed as the idea is not new it is only in detail that this is likely to be criticised.

5th. The distinction which I have drawn between the roots and the grammatical forms is approved by Professor Sayce.

These admissions seem to show that there is no initial fallacy of method in my decipherment.

The arguments brought against me are equally satisfactory to me, because I think they show how weak the opposition case must be considered, so far as general principles are concerned.

1st. As regards an Egyptian comparison, I have, I hope, strengthened my position by aid of the discoveries of Professor de Laconperie, and by Dr. Isaac Taylor's discovery of Finnic words in Egyptian. All that I have had to reconsider is the phonetic question, and in cases where the Egyptian word is Finnic the phonetic value also may be sustained. The Egyptian comparison is most valuable ideographically, and will I believe be much used in the future.

2nd. Exception is taken to the *subject* of texts. This also is I think an objection which may be met. If "pious addresses to the deity" are unknown "before the Muhammedan period," what becomes of the Bible? I have shown that my readings recall in subject certain known Akkadian texts, but as the necessary books are not generally available I here give one text for comparison. It may be noted that the magical chapters of the ancient Egyptian Ritual are of a somewhat similar character and were inscribed on sarcophagi.

"Talisman, talisman limit not to be passed, limit which the gods may not pass . . . whether it be an evil utug, an evil alal, an evil gigim, an evil god, an evil maskim, a fantom, a spectre, a vampire, an incubus, a succuba, an imp or the evil plague, the grievous fever, the evil sickness, which raises its head against the good waters of Ea, may the barrier of Ea stay it . . . may the pillar and the capital stay its way . . . like water may it make them run, like leaves may it make them tremble, like fat may it roast them, &c." (W. A. I, iv, 16 I, Magie p. 44.) This magic text is too long to give entire, and it is only one out of a large number.

As the texts under consideration are accompanied by winged figures and others recognised as figures of deities ; as such talismans are of general occurrence among early Altaic tribes ; and as the so called *historical*

renderings are simply "Says A. the son of B. the king of C.," followed by the said hypothetical person *saying nothing*, I submit that my suggestions are not of necessity anachronisms, but contain a possible explanation.

3rd. Exception is taken to the words *Ma* and *Ku* which I assign to characters on the bilingual. This also may yet be sustained. *Ma* is acknowledged by Lenormant, Delitzsch, Taylor, and others, to have been an Akkadian word for country, and it is the common and ancient word for country in all Finnic dialects.¹ *Ku* is said by Fox Talbot to have been an Akkadian word for king; Lenormant gives it as a Proto-Medic word, and words clearly connected therewith are found in many Altaic dialects. It will be admitted by all cuneiform scholars that it is as yet quite impossible to dogmatise about the monosyllabic emblems used in Akkadian. They are known to have been polyphones, that is to say that being originally pictures the reader might apply to them more than one word, just as on seeing a king's head on a coin we might call it king or monarch or sovereign or head or face. That the emblem used for king had the sound *Ku* is beyond dispute. The question is how did the emblem get this sound?

4th. It is urged that we have so many Altaic dialects to consider.² This is perfectly true, but that Proto-Medic and Akkadian, Sumerian, Cassite and Susian, are Altaic languages of one class cannot be denied; their affinity to Turkic and Finnic dialects is admitted by all. Of course in our own time the dialects have diverged and increased in number, and even in the time of Darius the known dialects of western Asia had diverged. Nevertheless a large vocabulary is common to Finnish, Etruscan, Akkadian, Proto-Medic, and even to Susian and Cassite. We are dealing with a period 2,000 to 4,000 B.C.; had I made use of modern Turkish or modern Tamil I might well have been reproved; but I have made use of the *most ancient* known Altaic dialects and of the dialects spoken in countries *nearest* to those where the Hittites dwelt.

It is impossible to my mind that the words Tar, Sar, Lar, Nazi, Senna, Ku, Tas, Kha, and Essebu should occur in names of Hittite kings, and represent the words for king and prince in Akkadian and in Etruscan, if there was no linguistic connection, and the fact that the words in the geographical texts are also similar to geographical sounds in Akkadian

¹ Finnic, *Ma*; Etruscan, *Ma*; Akkadian, *Ma*. *Ma* = country. See Sayce, "Assyrian Grammar," No. 291, p. 25; No. 399, p. 34. Also in T.B.A., IV, p. 305, &c., &c. Chossat, p. 129, quotes Delitzsch.

² Prof. Sayce himself, speaking of the dialects of Elam and Media, has said of Akkadian, that it "may be called the Sanskrit of the Turanian family," and of the Elamite he says that it belongs "both grammatically and lexically to the Finnic division of the Ugrian group," while Akkadian he compares with Wogul—a Finnic dialect. (T.B.A., IV, pp. 466, 468). These statements, in which he was preceded by Lenormant, may be set against the known differences between Proto-Medic and Akkadian.

(though better scholars may modify many of my renderings) is also a very strong argument.

I now desire to state the points which seem safe.

1. That the Hittites were an Ugro-Altaic people whose language was nearest to those of the Finnic group.

2. That their language was agglutinative.

3. That "packets" occur on the texts.

4. That the ideographic values are the same in some cases as in Egyptian.

5. That certain comparisons are possible with the earliest known cuneiform.

6. That the inscriptions are possibly Talismans in several cases if not in all.

What is now needful is the verification of the roots by careful comparative study, which will require some time and labour to accomplish. To this I hope to devote spare time in the future.

C. R. CONDER.

HITTITES AND ETRUSCANS.

THE work which Dr. Isaac Taylor published in 1874, called "Etruscan Researches," was the foundation of a true knowledge of Etruscan language. He found that, like the Akkadian—which has been called the Sanskrit of the Turanian languages—Etruscan was an Ugro-Altaic language, closely akin to the Finnic dialects. It is therefore clear that it will assist us in studying what is popularly called Hittite. The Etruscans were akin to the Pelasgi, the Lydians, Lycians and Carians, and the syllabaries of Lycia and Caria are closely related to the Cypriote, which preserves for us the sounds of the Hittite language. The following notes I have put down in reading Dr. Isaac Taylor's book.

Page 12. The conflicting statements of classic authors as to the populations of Asia Minor are due clearly to difference of date. The earlier tribes were Altaic, but Aryan and Semitic tribes pushed in later. The older writers, such as Homer, refer apparently to the Altaic tribes. Herodotus (I, 57) says the Pelasgic language was barbarous; Homer (Il. v, 867) says the Carians spoke a barbarous tongue. Professor Sayce has just published an important paper on the Aryan Carians.

Page 14. Etruscans and Lycians both traced descent from the mother, indicating the original polyandry, which I believe distinguishes Turanian from Semitic peoples. Page 21. The Tuscans of Italy, the Tusci of Asiatic Sarmatia, the Thuschi, an Ugric existing tribe in the south of the Caucasus, may perhaps be named from the word Tas or Tassak, which means "hero" in Akkadian and in other dialects. Page 23. The Etruscans or Tursci may derive their name from Tur-Sak "tent-son," Tur meaning a

"camp," as Dr. Taylor shows (pp. 343-4). The Etruscans called themselves *Rasenna*, an Ugrian word meaning "tribesmen." They are called by the Greek writers *Turthenoi* and *Tursenoi*, the first meaning *Turansians*, the latter "tent people" and equivalent to *Tursci*.

Page 29. In using the word *Altaic* or *Ugrian*, I mean it to be understood that I refer to the family of languages divided by Max Muller into five groups, *Finnic*, *Samoyedic*, *Turkic*, *Mongolic*, *Tungusic*. The *Finnic* group appears to be the nearest to the old tongues of Western Asia, Greece, and Italy, but the *Turco-Tatar* languages also approach the *Akkadian*. Even in Chinese many words like those used by *Akkadians* occur, and on the other hand *Basque*, which as an incorporating language has been divided off from the *Altaic* family and grouped as *Euskarie* with *Esquimaux* and *American*, has been shown by Lenormant to be likewise connected with *Akkadian*. The grouping depends on grammar rather than on words, but the old monosyllabic roots are older even than the grammar, and start up in every direction, not only in *Altaic* but in other groups of North *Turanian* languages as well.

Page 36. The Etruscans, as known historically, were a burying people, but there is evidence that originally they burned the dead, as did the *Akkadians*. That they worshipped the spirits of their ancestors is clear, and the word *Kan* for "spirit" appears to be the Egyptian *Ka* for "double" or "image;" *Akkadian Ka* "face," *Gan* "being," *Tunguse, han*; *Mongol t'tsen*, "image;" *Turkish jan*, "spirit" (p. 108); *Samoyed Kane*, "face;" *Ostiach kinse*, "image" (p. 277). The worship of the shade was, however, but part of the general adoration of a living spirit in every object of nature which was the essential idea of *Akkadian*, *Etruscan*, *Hittite*, and every other *Turanian* race.

Page 39. Dr. Taylor follows Klaproth in believing the Egyptians to have been (in part at least) *Turanian*. The evidence on this point is growing continually stronger. It is true that the Egyptian language seems to be very distinct from the *Altaic*; the structure is not that of *Akkadian*, and the words as a rule are quite distinct. But throughout Asia in all ages we have mixed languages, that is to say, numbers of foreign words are used, so that by structure rather than by words the language must be classed. These foreign words are evidence of foreign influence or of mixed race, and *Finnic* words in Egyptian are evidence of a *Finnic* or *Ugrian* element in Egyptian population just as *Semitic* words in Egyptian came in with the *Hyksos*. Among these *Altaic* words we have *Set*, "fire;" *Aa*, "moon;" *Rut*, "man;" *Atr*, "chamber;" *Ta*, "country," may be compared with *Tha* or *tai*, "mountain;" *Nub*, "gold" or "bright," with *Nab* or *Nap*, "light;" *Ka*, "husband," with *Ak*, "male;" *Ra*, "light," with *Ri*, "shine," and *Ar*, "light." These are but a few instances out of many. The names of the gods tell the same—*Nu*, "heaven" = *Na*, "heaven;" *Tum* or *Tmu*, "sun" = *Tam*, "sun;" *Har*, "light" = *Hur* and *Ar* "light."

Nor is it on language alone that we depend. The story of the wonderful hair of Bata's bride may be found in *Finnic* mythology and in *Bengal*,

as well as in Egypt. The story of the Caskets, one inside another, is Mongol as well as Egyptian. The Sphinx is found in Cappadocia and in Etruria, as well as in Egypt. The "White Syrians," whom Professor Sayce calls Hittites, were probably Altaic, and connected with the White Lybians. The tomb chambers of Egypt and Etruria, where the family gathered to worship the *Ka*, or "image" of the ancestor, were originally the chambers under tumuli found in Asia and Europe alike. The discovery of a connection between the cuneiform system of writing and the Egyptian hieroglyphics tells the same tale—the Ziggur of Chaldea and the Egyptian pyramids are the same structures. All this shows that the comparison of Egyptian and Hittite symbols is based on a firm scientific basis, and the use of determinatives accompanying words in Egyptian may probably have arisen from the application of Altaic ideographs to a new language, perhaps of African, perhaps of South Turanian origin.

Page 61. The physical type of Etruria—large-headed, with sturdy limbs, a face without hair, short nose, high cheek-bones, black eyes—is Turanian. It recalls the sturdy beardless figures of the Cappadocian monuments. The old Egyptian type was very similar, and in Babylonia the oldest Akkadian type is much the same. The yellow complexion of the pig-tailed Hittites also indicates Altaic origin. The celebrated Hittite boot is the Etruscan *Calceus Repandus*. The Mongol type of modern times Dr. Taylor shows to be the same; and I have recognised this type among the Smyrna peasantry and the Hammals of Constantinople. In fact, their Turanian appearance is as surprising as is that of the Hottentots.

Page 66. If art and love of colour were distinctive of the Etruscans and Egyptians, so also was it of Akkadians and Hittites.

Page 79. The Etruscan name Tarquin, for a king, is compared by Dr. Taylor with the Siberian Tar-khan. This recalls the Chinese custom of making double words, one monosyllable acting to determine the meaning of the other, since each sound had many meanings. So in Akkadian and cognate dialects, Tar, Dur and Tur mean "chief" or "king," but Dara means "deer," Tur "young," and Tur "camp" in many Ugrie dialects, and probably in Hittite. For this reason another word for king is added, which in Akkadian is known in the forms, Ak, Uk, Ku, Khu, Kha, Khan, Kan, the Chinese Kiun, "prince," and Kone, "kingdom," the Tatar Kan, the Turkish Khan. Again, in the word Lucumo, we have the old Lau-Kan, "man-prince" of Etruscan monuments, which may be compared with the Akkadian Lu-gal, "chief," since Gal has synonyms in Gan. The word Tarquin is the Hittite Tarku, Tarak, Tarkhu, Tarkha, the word rendered Tarkon in Greek, and the title Tark-ku on the Hittite bilingual, where—as an inspection shows—Mr. Pinches' reading, Ku, seems much nearer to the existing forms than Professor Sayce's reading, Rik.

The name of Tarkon thus connects the Hittites with Siberia on the one side, and Etruria on the other.

Page 96. Kulmo is apparently Etruscan for death ; it is the Finnic Kalma. Dr. Taylor connects the Indian Kali, whose other name is Durga—the Akkadian word for “fate.” The Akkadian word Khal, “slay,” is no doubt connected ; and the goddess Nin-ki-gal, who ruled the infernal region, the Susian goddess Khali, the Akkadian infernal God Ir-Kalla (whom I regard as the original of Herakles), may also be connected, as also the Akkadian word Khul, “evil.” In Permian Kul means “devil,” in Samoyed Kolma is “ghost,” Kurmo “to die.” The Ostiak and Turkish word Ghul for ghost has come to be used even by Arabs for a vampire. The Etruscans, like the Egyptians, distinguished apparently the ghost or shade from the spirit or double.

Page 113. The demon called Nathum in Etruscan Dr. Isaac Taylor compares with the Mongol Natagai, and with the Ostiak Notam “to pursue.” In Akkadian certain demons were called “pouncers,” and supposed to leap on men like the Semitic Lil. The Chaldean demon called Nattig may be connected with the Mongol Natagai.

Page 114. The Etruscans regarded red apparently as a propitious colour. So did the Egyptians, who are represented red on the monuments, as the Hottentots also to the present day paint themselves red. Set, the “fire” god, is represented red in Egypt. In the Etruscan Hades the good spirits are red, the evil ones black. Red is the second sacred colour of Moslems. The Arabs, however (connected with the dark south Turanian race), represented heroes as black.

Page 117. The demon Charon of the Etruscans appears to have answered to the Akkadian Mulge. The manes of Etruria are compared with Mana, the Finnic god of the dead. This is apparently the Cretan Minos, one of the judges of Hell, and perhaps ultimately connected, as Dr. Taylor says, with Menes in Egypt, and Manu in India, the first man and king of the dead, as Yima or Yama among Aryans is the first man and also king of the dead. Dr. Taylor suggests a derivation from Ma-na, “of earth,” but the root may have been Man. The Egyptian Amenti, the Finnic Manala for Hades, are no doubt connected.

Page 122. The Lares take their name from Lar, meaning “lord.” This word is clearly traceable in the Hittite and Cappadocian names for princes, Tarkhu-lara and Sap-ler ; and is perhaps the Akkadian *rar* or *lul* for “prince.”

Page 124. Tar and Tarku, gods of Asia Minor, are clearly connected with Tara, the Esthonian word for “God,” and with Tar, “chief,” just as An—meaning “high”—is found to be the root of words for both God and king in the Akkadian. As regards the word Lemur for a ghost, this Dr. Taylor derives from the root Lem, recalling the Akkadian Lam or Lama, which became the Babylonian Lamma for a good spirit.

Page 127. Genius which Dr. Taylor connects with Turkish Jan for “soul,” is no doubt connected with Kan, already noticed. Penates Dr. Taylor derives from the root Pan, and compares with the Buni, or protecting spirits of the Tunguses. Probably the word Phanu or “fane” for a sacred place, comes from the same root, and this may explain the

occurrence of Ban as a topographical word in Hittite, while the names of deities Lugal-ban-da (ban-da means youth or strength according to Mr. Pinches), Ea-bani, and Pani-dimri in Akkadian and Susian must also be recalled. The word Bin, though now generally read Rimmon, might have the same origin.

Page 129. As regards Malavisch, a beautiful fairy of the Etruscans, if it be correct to compare the Esthonian Maallused, this may suggest the origin of the beautiful Melusina, who is the Phœnician Leiathane or Leviathan, connected with the sun-god Melcarth, whose name I believe to mean Muluk Ar-ta, or "King of Light."

Page 131. Turanian gods, says Dr. Taylor, have names compounded with Tin and Sil. These are probably the Akkadian Tin, "life," and Sir, "light." Tina, the Etruscan god of heaven, may, he supposes, come from Tien, "sky." The word occurs in the Akkadian Din-ir, "God," the Turkish Ten-ri, "God," and in many of the Altaic dialects. The ideas of grow, live, rise, and shine, are connected in many other roots, such as Ri, Te, Ak, &c., &c.

Page 134. Thana, who became the Roman Diana, may perhaps be connected with Tan or Dun, "powerful," "high ;"¹ and from this root, I believe, came the non-Semitic Phœnician Tanith, the Egyptian Tan.

Page 134. Turan, the Etruscan Juno, is perhaps simply as in Akkadian, Tur-an, "Chief of the Sky."

Minerva, also Etruscan, Dr. Taylor connects with Men, the Samoyed for "house." She was a dawn goddess. The Ostiac Noman (said to be equivalent to the Roman Numen) means "heaven" or "God's house." This brings us back to Ea, "the house," who is the Akkadian ocean and heaven god. Dr. Taylor decides in favour of the roots Er, "red" or "dawn," with suffix va, and Men, "heaven." In Akkadian we have Ir and Ar for "light."

Page 138. Neptune or Nethuns he compares with the Hungarian Nap for the Sun, the Samoyed Nup, Nub, Nop, and the Japanese Nipon. Here, again, we have the Akkadian Nab or Nap for "light"—Egyptian Nub, generally rendered "golden," an appellation of the rising sun.

Page 140. Setbluns, the Vulcan or fire god of Etruria, is derived from the root Seth for "fire." Here, no doubt, we have the true origin of Set, the red god in Egypt; the Hittite Set or Sut, or Sut-ikh, with a final guttural, perhaps the Shita of the Assyrians. Un, Uns, and lun, luns, are words for God—the Ostiak *lung*, the Permian *lung*, perhaps the Akkadian Un, "chief," An, "God."

Page 142. Usil, the Etruscan Apollo, is said to come from Ausel, "dawn," the Permian Asal, "morning." The root Sil or Sir in Akkadian, and in many Altaic dialects, means to shine or rise.

The Novensiles, or nine great Etruscan gods, Dr. Taylor connects with

¹ The primary root is Ta. This occurs also in Chinese for "great," and here again my rendering Ta for the hand holding a stick is strengthened by the universal occurrence in Turanian dialects of this root.

the Samoyed words, nom numma noman (m and v being originally one sound), meaning "heaven," or "God." In Akkadian we have num and nim for high, num-ma "high-land," etc. The Novensiles were "heaven shiners," or "those who rise (or shine) above." The Æsars come from the root Is, the common Altaic word for God and sky. The Akkadian Is = mountain or light.

Page 146. In the names Feronia¹ and Annaperenna we have the root Par, also in the Albanian Perendi "God." It is evidently the Akkadian *Bar*, or *Par*, or *Bil*, meaning "bright," "fiery," "white," "day," and hence "year," or "period." Anna-perenna, "God of day" (or of time), was the Goddess of the new year, and occurs in India as Annapurna.

Page 147. Ceres Dr. Taylor derives from Ostiac kyra, Lapp aker, "a field"—Ceres being the harvest goddess. In Akkadian we have *Kir*, *Khir*, *Kar*, *Kil*, *Gil*, *Gin*, *Gan*, all meaning "enclose," "surround," whence perhaps Gilgal, a circle—a word not properly Semitic.

Page 148. Vesta, usually regarded as an Aryan word—though the Turanians were great fire-worshippers—Dr. Taylor connected with the Ugrić *ewsta*, for "hearth." Janus, the other primitive Roman God, is also known as Janes and Janis. The similarity to the non-Vedic Ganesa was long ago pointed out; no doubt these words, with Juno and Junones, come from the root Gan, for spirit, already mentioned.

Page 149. Turm was the Etruscan God of the boundary stone connected with Tur, "to stand." Perhaps the Akkadian *Dul*, for tumulus, may be connected, as well as Tur, "abode" or "stand."

Page 189. The words for numerals do not appear to be closely connected with Akkadian, which shows us that the Etruscans must have migrated in an early stage of civilisation. *Ki*, for "two," is probably the Akkadian *Kas*; *Thu*, "five," may be the Akkadian *S'a*, and *Sa*, four (or *Zu*), perhaps *Za*, "four" (if that be correct in Akkadian), but *Tiv*, "ten," is not the Akkadian *Ge*, "ten." That the Etruscan numerals are Altaic is however the real test of Dr. Taylor's discovery.

Page 202. Lupa, the Etruscan for "died," may be the Akkadian Rap, "to seize," which occurs in the names of various kinds of spectres. Ril, "years," may be connected with Ri, "to shine," or "to rise." Tular, for "tombs," from the root Tul, originally meant "burning places," the Finnic and Mongolic tül, to "burn." With these is connected no doubt the Akkadian Tul or Dul, rendered "tumulus," and "altar." Suthi, for "tomb," said to be known also in Carian, also comes from the root Seth, Suth "fire," considered in speaking of Set.

The words for relationships are equally instructive. *Al* for "child" is, perhaps, the Akkadian *Ul*, "male," and *lu*, "man." Sech, for "child," is the Akkadian and Susian Sak, "son," perhaps connected with Sag, "head." Etera and Tora, for "little," are the Akkadian Tur, "young." Isa, for a woman, may possibly be connected with Sal, "female," in

¹ A great number of these local gods are mentioned by Tertullian and in Ovid.

Akkadian. Kahati, a word rendered Violens in Latin, may be connected with gug, gig, gik, meaning "violent" in Akkadian and Susian.

Page 260. The words for colours do not seem to agree with Akkadian —another indication that the civilisation of the Etruscans is late.

Ca is said to have been an old Etruscan word for a "man" (page 268) ; the Egyptian Ka "husband" or "male." In Akkadian also Ak means "male."

The post position, *ina* or *na*, "belonging to," is not only Etruscan and Finnish, but it is the Hittite and Akkadian *Na*, "of." *Mi*, "I," is the Akkadian *Mu*, "I," connected with *Ma* or *Mu*, "to be," and common in many Altaic dialects. The sign of agency, *S*, postposed also, appears to be recognisable in Etruscan.

Page 288. The word Thup, or Thap, "to engrave," often repeated as a verb, is clearly, I think, the Akkadian *Dub*, *Dib*, "to split," and hence to "sculpture," which came into use among the Assyrians for sculptured writing.

Page 295. The two-headed Etruscan figures are to be compared with the two-headed god on a Cappadocian cylinder, the two-headed eagle of the same country, and the two-headed god, Set-Har, in Egypt. Janus originally represented the two aspects, bright and dark, day and night, the kind and the angry, good and evil.

Page 300. *Ken* is Etruscan, probably, for "this," and is a preposition. *Gan*, "this," is preposed in Akkadian. In the Yenissei *kin* = "here," and *kan* = there (p. 303). *Teke*, to give, the Mordwin *tukén* is the Akkadian *tuk*, "give ;" and *Thuker*, "gifts" (p. 306), is the Akkadian *tug*, "gift."

Page 314. *Druna*, "royalty," is doubtfully Etruscan ; but we have *Dur*, "prince," in Akkadian (p. 317). *Aracos* for a "hawk," seems to include the root *gus*, "bird" or "cock" in Akkadian. *Burrus* and *Burra*, "red," is perhaps the Akkadian *Bar*, "bright." *Toga*, thought to come from a root *Ta*, "make," recalls *Tu* or *Du*, "make" in Akkadian (p. 329). *Atrium* is from an old *atr*, "hall," the Egyptian *atr*, chamber. In Hittite *Atr* appears in town names. In Akkadian *tir* means a "seat."

Falæ, "mountains" in Etruscan, is connected with numerous Altaic words (p. 330), meaning "high," "hill," or "sky." I believe this explains *Pil* or *Pal* as a geographic term in Hittite.

Tepæ, another Etruscan word for hill, explains the Hittite *Thep* ; and in Tartar and Turkic tongues *tepe* means "hill ;" Finnic, *typä* ; Mongol, *dobo*.

Page 332. *Arbiter* from *Arpi-ter*, "lot-judge," explained by aid of Finnish, calls the Akkadian *Tur*, *Ter*, *Tir*, "judge."

Page 335. *Sagitta*, rendered *Tak-it*, "stone-projectile," illustrates the Hittite *It*, represented by an arrow.

Page 338. The suffix *senna*, in the name *Rasenna*, is very useful. In Ugrie dialect *Sena* means "man"—no doubt the Susian and Proto-Medic *Sân*. This explains perhaps *Lab-Senna*, the name of a Hittite king.

Page 345. Not many geographical names are discussed by Dr. Taylor. He connects the river *Arno* with *Arna*, the Tatar word for a "canal." In

Akkadian *Aria* occurs for river, *Re* and *Ria* meaning "to flow." The word *Tha*, *Tai*, for mountain, said to occur in *Sorakte* or "snowy mountain," explains the suffixed *Ta* in several Hittite geographical names.

Cære, "town," is the Akkadian *Kir*, "fortress," and its other name, *Agylla*, appears to be *Ak-ahu*, "city of the king."

Page 378. "A cumulative argument," says Dr. Taylor, in conclusion, "is a chain with many parallel links—the strength of such a chain is not measured by the weakness of the weakest of the links, but by the united strength of all those which are without a flaw." Now this applies to the present comparison with Akkadian. The cumulative evidence of language, physiognomy, religion, and custom connects the Etruscans closely with Egyptians, Hittites, and Akkadians. The present comparison will, I think, be considered to give strong evidence in favour of the Altaic origin of the Hittites. If the Akkadian language, customs, mythology, and physiognomy are so faithfully preserved among tribes as remote and as recent as the Etruscans and the Finns; if even in Egypt the same element crops up, and if the vocabularies show so many common words in all dialects, from Basque to Siberian, it becomes probable that the true explanation of the language of Carians, Lycians, Lydians, Khetæ, and Canaanites, is to be sought in a study of Akkadian, controlled by comparison with other Altaic tongues, ancient or modern.
















C. R. CONDER.

THE CRITICISM OF THE HITTITES.

ANONYMOUS criticism does not require an answer, since however confident the critic's statements may be, his right to speak can only be weighed when his name is known. Professor Sayce's criticism being signed, requires full consideration. Two other critiques I may make a few notes concerning, in order to show that they would tend rather to mislead the public as to facts. The "*St. James's Gazette*," of 26th May, having heard what Professor Sayce had to say concerning a language which the writer has apparently not studied, makes the following statements:—

"In the volume before us Captain Conder makes the third attempt at solution which he has ventured in the last four years." This is not exactly correct. I have never before the 26th February, 1887, stated that I felt able to read a single word of the texts. In 1883, I proposed an ideographic comparison with Egyptian, which I hold to be sound in principle. In 1883, I stated that the Hittites were Turanian, and their language probably to be explained by Akkadian. On these lines I have worked ever since. The assertion that the resemblances to Egyptian are "illusory" requires to be proved. Recent discoveries of a connection between cuneiform and Egyptian show that such comparison is not likely to be arbitrary.

"In November, he . . . spoke of the explanation from the Cypriote syllabics in disparaging terms" (but see "Syrian Stone Lore," p. 24), and I still consider that of the eight comparisons put forward by previous writers the majority are very doubtful.

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| 1.  =  (= <i>yi</i> . | 2.  =   <i>mo</i> . |
| 3.   =   <i>to</i> . | 4.   <i>se</i> . |
| 5.   <i>si</i> . | 6.   <i>u</i> . |

It was not until working at the comparison further that I found it possible to improve on this attempt, partly by falling back on some of Professor Sayce's earlier work, but also by original research. I here give a sketch of the emblems doubtfully identified. ("Taylor's Alphabet," II, p. 123.) As regards No. 1, Professor Sayce now prefers his old comparison, *Ne*, which I adopt, and agrees that it is a pronoun. As to No. 2, which affects the bilingual, he regards the Hittite now as the emblem for "four," but this must be proved. In Akkadian four has not the sound *Me* required by the bilingual, nor would the value "four" do for the Hamath stones, since in Altaic tongues the numeral precedes the noun. The plural *Me* and *Mes*, in Proto-Medic and Akkadian, Professor Sayce has himself written about, and it rests on the authority of Lenormant. No. 5 I propose to discard because it selects only one form of the Cypriote, *Si*, and does not exactly give the Hittite form. These values appear to me to have been a stumbling block, and it was only when I found it possible to make the Hittite emblems agree with known values in Akkadian, that I felt the real value of the Cypriote. In "Syrian Stone Lore" I have said (p. 24), "If it were certain that the Cypriote syllabaries were derived from the Syrian hieroglyphs, we should, no doubt, have a most valuable means of determining the sounds represented on the hieroglyphic inscriptions, but the resemblances are at present not numerous nor always very close."

As regards the Plate in "Syrian Stone Lore," I have given 17 comparisons; of these no less than 11 will, I think, stand while 6 are wrong. Out of these I have given 5, which are letters of the Egyptian Alphabet having values represented by the Hebrew letters shown. Those values are correct, but I have not since 1883 ever stated that the phonetic values in Hittite and Egyptian are the same. In the majority of cases the phonetic values differ; but if Dr. Taylor and Klaproth be right in finding Finnic words in Egyptian, some phonetic values even might agree. This will form the subject of my future study of this element.

"Symbols which in November he considered to represent *t* and *u* he now believes to be vowels, those for *p* and *g* have become the syllabics *mes* and *pal*, while the signs for *a* and *p* are now to stand for *zu* and *du*." In the cause of truth I am, I hope, never afraid to own an error, but this criticism shows how hastily the critic has glanced at my work. In fact,

to review within a fortnight the work of three years is evidently impossible. T and N have not become vowels, since the rendering is not alphabetic. The ideographic comparison with N remains untouched. The ideographic value of the Egyptian *K*, which the critic calls *G*, is still, I think, probably the same as that of the Hittite sign compared. The ideographic values of the Egyptian A and B may also be retained, although being mere pictures no argument can rest upon them.

I am said to "have practically abandoned my attempt at explaining the Hittite hieroglyphs from the Egyptian." This, as will be seen from my book, is quite incorrect. On the contrary, the discovery of the language has enabled me to pursue this comparison more surely, and the labours of others have shown that I may have been right in making the comparison ideographically, though phonetically only certain words can be compared. I hope soon to publish a much more extensive plate in confirmation of this comparison, which rests on a true scientific basis.



"It was probably an agglutinative language belonging to . . . the Ural-Altaic." Yes, but no one has said so before, as far as my reading goes. The comparisons hitherto have been with Georgian and Hebrew, both inflexional tongues. Georgian is as yet not classed, though Hommel shows a connection with Proto-Medic. Hebrew is Semitic, not Ural-Altaic.

"It is, however, quite another question whether out of the vast group of the Ural-Altaic tongues . . . Turkish, Tamil, Lapp, Magyar, and Mantchu, Captain Conder is justified in accepting the Accadian speech." This a fair but a very weak objection. Max Muller and Dr. Taylor, neither of them class Tamil as an Altaic language. Max Muller groups the eight Tamulic dialects as South Turanian—a family by themselves.¹ In language all philologists tell us structure is more important than words, yet a large vocabulary is common to the Turkic and Finnic groups of the Altaic, and the old monosyllabic words or roots, such as *Ma*, *Ku*, &c., which are "primary roots," are traceable in the Mongolic dialects and in the monosyllabic Chinese. These roots are indeed generally recognised to be the oldest elements in Altaic speech. Akkadian is the oldest known dialect, and has a vocabulary comparable with all the Altaic vocabularies. There are, moreover, two good reasons for looking to Akkadian and to Proto-Medic. First, that they are the dialects of the countries nearest to the land of the Hittites. Second, that the grammar of these dialects appears to agree better with the texts than any other grammar. Had I looked to Turkish, or Tamil, or Japanese, for the key, it would have been pointed out that these languages were too modern, and I might have been referred to Akkadian as a better guide.

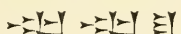
¹ It may, however, be well to quote Max Muller's words as to "the relationship of both these branches (North and South Turanian) themselves, and their ultimate dependence on the Chinese." ("Science of Language," 5th edition, p. 377.)

"The Proto-Medic, which is very distantly connected with the Akkadian . . . may possibly furnish a nearer analogue." Proto-Medic is known to us in the later times of the Persian Achæmenidæ. It is, therefore, perhaps, not as safe a guide as the old Akkadian, which is traced more than 1,000 years earlier. Proto-Medic is very closely allied to Akkadian. The writer cannot, I think, have read Lenormant's works on the subject. Not only is there a large common vocabulary, but the structure of the grammar is practically the same, differing from the Susian structure. It is the old structure which distinguishes these tongues from later Altaic dialects, and the structure will, I think, prove to be that of the Hittite texts. Even the bilingual is in favour of Akkadian, the genitive being placed after the nominative, not before, as in Proto-Medic and Chinese, and being without declining particle, on the bilingual.

"Professor Sayce has asserted . . . that no Akkadist will admit" my statements as to certain words. This is a question for further detailed study.

To explain this important point, I must say that certain symbols like the two here given   occur in Akkadian either alone or with others. They have known sounds. The first has the sound *Pa*—as in the word *Pa-te-si*, for a "ruler." The second has the sound *Ku*—as in *Likku*, for a "dog." It is contended by Professor Sayce that when they occur alone they are to be regarded as pictures only (ideograms), and rendered by the words *gisdar*, "sceptre," and *anin*, "king." It might be urged that land-lord is to be so read, but that "land" standing alone is to be read "country," and "lord" standing alone to be read "master." The existence of the words country, district, region, does not disprove the existence of the word land, and the existence of master, king, prince does not show that there is no word lord. What we want to know is, was there a word *Pa*, meaning "sceptre," and a word *Ku*, meaning "king?" Dr. Taylor, Mr. Houghton, and others say *Pa* means sceptre; Lenormant and Fox Talbot says *Ku* means king. But the true way of settling the question is to see whether *Ku* is a word for king common to many Altaic tongues, and whether *Pa* is an old word in such tongues for sceptre. In the case of *Pa*, my evidence is not ready, for I never expected that so well recognised a word would be doubted. I rest at present on Dr. Taylor and Houghton. As regards *Ku*, I do not for a moment doubt that *Ku* is the old Altaic word for king. Even in Chinese this may be recognised in the word *Koue*, "kingdom," and in Akkadian we hear *Ku*, *Ak*, *Uk*, *Khu*, all stated by cuneiform scholars to mean king, though *Ku* means also "high," *Ak* also "male," &c. Professor Sayce's denial, that *Ma* is the word for country may be met. He has repeatedly said that *Ma* is Akkadian for country. The word is given by Lenormant, and occurs in all the Finnic dialects, according to Taylor. It happens that both the words, *Anin* and *Murun*, mentioned by Professor Sayce, are noticed in my book.

Another objection raised by Professor Sayce is to the word Kakama for Amen. This, however, might yet prove to have been the case.


 Ca - ca - ma.

I find it spelt phonetically *Ca-ca-ma* in an Assyrian text. The Assyrians regarded Akkadian as a holy language, and no doubt imported words into their prayers just as Aramaic words appear in sacred Pehlevi books.

“Dr. Wright’s book contains a table drawn up by Dr. Isaac Taylor of eight Hittite hieroglyphs, whose phonetic values he regards as established. . . . Of these eight interpretations Captain Conder practically accepts seven, while, as to the eighth, he may very possibly be right.” This is not quite the case. Out of the eight I only accept two, and I regard the rest as doubtful. The plate showing these values comes from Dr. Taylor’s “Alphabet.” Dr. Taylor does not by any means commit himself to them. He says: “In the present state of Hittite decipherment they can only claim to be provisional” (p. 123). Nor is it the case that I have only added four new values; I have added twenty-eight in all to the two which I adopted.

“To any one familiar with the style of ancient Oriental records, the readings are preposterous.” I think if the writer had studied the magic tablets of the Akkadians he must have seen the strong family likeness which exists in their phraseology, words, and construction, as compared with my tentative readings. The Assyrian style of 700 B.C. is no guide to the style of talismans perhaps as old as 4000 B.C., written, not in an inflexional, but in a rude monosyllabic tongue, only as yet roughly agglutinative.

The reviewer in the “Athenæum” knows no Akkadian, and consequently only repeats Professor Sayce (May 28th, 1887): “His (Captain Conder) Akkadian acquirements are unfortunately meagre.” On this subject his opinion is of no value. Such is the uncertainty of the study that even half the sounds in Akkadian are said to be doubtful.

The words *gistar*, *Anin*, *Murun*, given by Professor Sayce, are all recognised by the very authorities from whom I have taken the words *Pa*, *Ma*, and *Ku*.

This reviewer, however, devotes his attention chiefly to the Egyptian connection, and makes some extraordinary statements. He says of Dr. Wright that he “assumed, without any ground whatever, that the Chita (*sic*) of the Egyptian inscriptions were the same people as the Khatti of the Assyrian inscriptions and the Hittites of the Bible.” The Kheta Khatti and Beni Kheth are identified because they are all proved to have lived in the same country.

“The group of signs referred to does not mean water.” Here the reviewer is, I think, wrong. In November, 1886, I find an authority rendering this ideogram—“Nu” = “watery mass.” The emblem in question not only stands for Nut, but also for Nu and the letter N.

"Set has nothing to do with Sed (*sic*), a genius, for this latter word comes from the root שִׁדְּד, to be strong." *Sed* is given by Lenormant as Assyrian. That Shedim comes from the Hebrew root in question is not proved. It is well known that many Assyrian and Hebrew words are of Altaic origin, and De Rouge may be right on this point. I have *not* said Set was one of the gods of the old Akkadian pantheon. I have said I think he was, and as the name appears to have been common to Etruscans, Hittites, and Egyptians, I have reasons for this supposition.

"He informs us that Ea means heavenly house, whereas it means house of water." The writer dogmatizes on a matter concerning which Lenormant felt doubt. The emblem *a* may be a phonetic complement, not of necessity to be rendered "water," and the fact that the god whom I identify with *Ea* is represented by the house alone or by the house with short *a*, agrees with this opinion of Lenormant's. That "Anu is a Semiticised form of Ana" of course is clear, but my only scruple was against making use of Semitic forms in speaking of Akkadian texts. That the Egyptian Xi may be rendered *ekh* is not my mistake, for the name of Sutech to which the writer refers is given by Chabas, De Rouge, and others. "The Egyptian emblem for throne does not mean majesty." It is the emblem not only of Isis, but also, according to Renouf, of the rising sun: "The hand grasping a stick does not mean cause, the pair of legs does not mean move, but extend." "The pot does not represent water." In each of these cases the writer is, I think, wrong: the emblems are common determinatives. The stick for "causation," the feet for "movement," the vase for "the watery mass" of heaven. Maspero and Renouf, in the two first cases, are not in accord with the reviewer.

As regards words like *Ma*, *Ku*, &c., it is thought by some cuneiform scholars that their syllabic value may be only part of their value, as words; *Ma*, the syllable, being derived from *Mat*, the original word. This took place in Egyptian, and may have taken place in Akkadian, but if in existing languages a monosyllable still represents the word (as in the case of *Ma*), such a theory becomes unnecessary. It is a question of comparative research in every case.

C. R. CONDER.

LYDDA AND ANTI-CHRIST.

ACCORDING to Moslem tradition the anti-Christ or Masîh ed Dejjâl ("False Messiah") is to be slain by Jesus the true Messiah at the gate of Lydda. This idea seems to me to arise from a confusion between Christian and Jewish teaching, not uncommon in the Koran and in the Sunna. In the Talmud (Tal Bab, Succah 52a) the Messiah Ben Joseph is men-

tioned as slain before the triumph of the Messiah Ben David. There is possibly in this some allusion to the Samaritan Taheb, or Messiah, called the Messiah Ben Joseph. Muhammad may, however, have connected the name with that of Joseph, husband of our Lord's mother. Now, according to the Jews (Tal Bab, Sabbath 104 b ; Tal Jer, Sanhed vii, 16), Ben Stada, who is usually identified by the Jews as representing our Lord, was executed at Lydda. So that, from a Jewish point of view, the false Messiah was slain at Lydda. It seems to me that a confused memory of the Talmudic tradition accounts for the Moslem legend, for it is well known that many Talmudic ideas have found their way into the Koran and the Sunna.

Ed Dejjâl appears to originate in the Masdean ideas of the false prophet who is to accompany Ahriman in the last days, for nearly the whole of the Moslem eschatology is founded on Persian ideas, such as may be studied in the Pehlevi Bundahish and Bahman Yast.

C. R. C.

THE CANAANITES.

THE probability of the Altaic origin of the Hittites shows that the Canaanites—like Finns and Akkadians—were probably a race who burned and did not bury the dead. The ashes found by Herr Schumacher under a dolmen agree with this view. The burning of children in honour of Moloch is also connected.

C. R. C.



THE KARNAK LIST OF PALESTINE.



ON the 3rd May, at a meeting of the Society of Biblical Archæology, the Rev. Henry George Tomkins presented his paper on the "Karnak List of Tributary Places in Palestine ; with an Introduction on the Campaign of Thothmes III against Megiddo." The writer traced the line of march from the Egyptian fortress of Tsar (or Tsal), along the ancient road discovered by the Rev. F. W. Holland, by way of Sharukhen (Tell es Sheri'ah, sheet xxiv), to Gaza, an Egyptian station. Thence the route was deflected eastwards by a tract of forest between Joppa and Carmel, as shown by Professor Maspero, in the *Leemans Album*. At Iakhem (el Kheimh) three roads were discussed by a council of war, viz. I, a dangerous mountain defile near 'Arnâ. II, a high road leading to the east of Ta'anak. III,





a high road north of 'Tsifta (Zebdah). Mr. Tomkins showed how these data agreed with the results of the Survey, proposing to see in the first the Wady el 'Arriân, very near to Umm el Fahm, which M. Maspero had proposed as a likely site for 'Arna; and inclining to the belief that Captain Conder is right in identifying Khûrbet el Mûjedd'a with Megiddo, and that the great route of the Egyptian armies to Northern Syria and the Euphrates was by way of Beth-shan across the Jordan and through Damascus, the line taken by the patriarchs, and probably in much later times, by Nekô, whom Josiah confronted, as Captain Conder says, at Megiddo, to cut him off from crossing the Jordan to Damascus. Mr. Tomkins's argument is given at length in the *Proceedings* (not *Transactions*) of the *Society of Biblical Archaeology*, and his Palestine List will appear in due course, with his previous paper on the Northern Syrian List in the *Transactions*.






Mr. Tomkins has treated these lists on the basis of the Great Map, Name Lists, and Memoirs, and has added a large number of proposed new identifications, of which many are ascertained, and others tentative.

In the Palestine List he has especially enlarged the previous results southwards in the regions of Shechem, Jerusalem, and Hebron, and in the Galilean country has availed himself of the excellent paper of Professor Maspero in the *Transactions of the Victoria Institute*, vol. xx. The proposal of Professor Sayce to see Jerusalem (Jebus) in Har-el was discussed, and also the views of Mr. Groff on Joseph-el and Jacob-el, for which Mr. Tomkins is disposed to claim a "local habitation" at Yasûf and Ikbâla respectively, whatever may be thought of the tribal theory. He thinks that the military occupation of posts on the east of Jordan by the Egyptians, to guard the fords and the great eastern route to Arabia, has been too much overlooked; and would parallel this by the occupation of posts across the Euphrates in the Sukhi-land as shown by the North Syrian List. He agrees (as Professor Maspero has done) in many of Captain Conder's identifications. He sees the name Nûn, still to be found

in more than one locality, in No. 75,   and in No. 77,

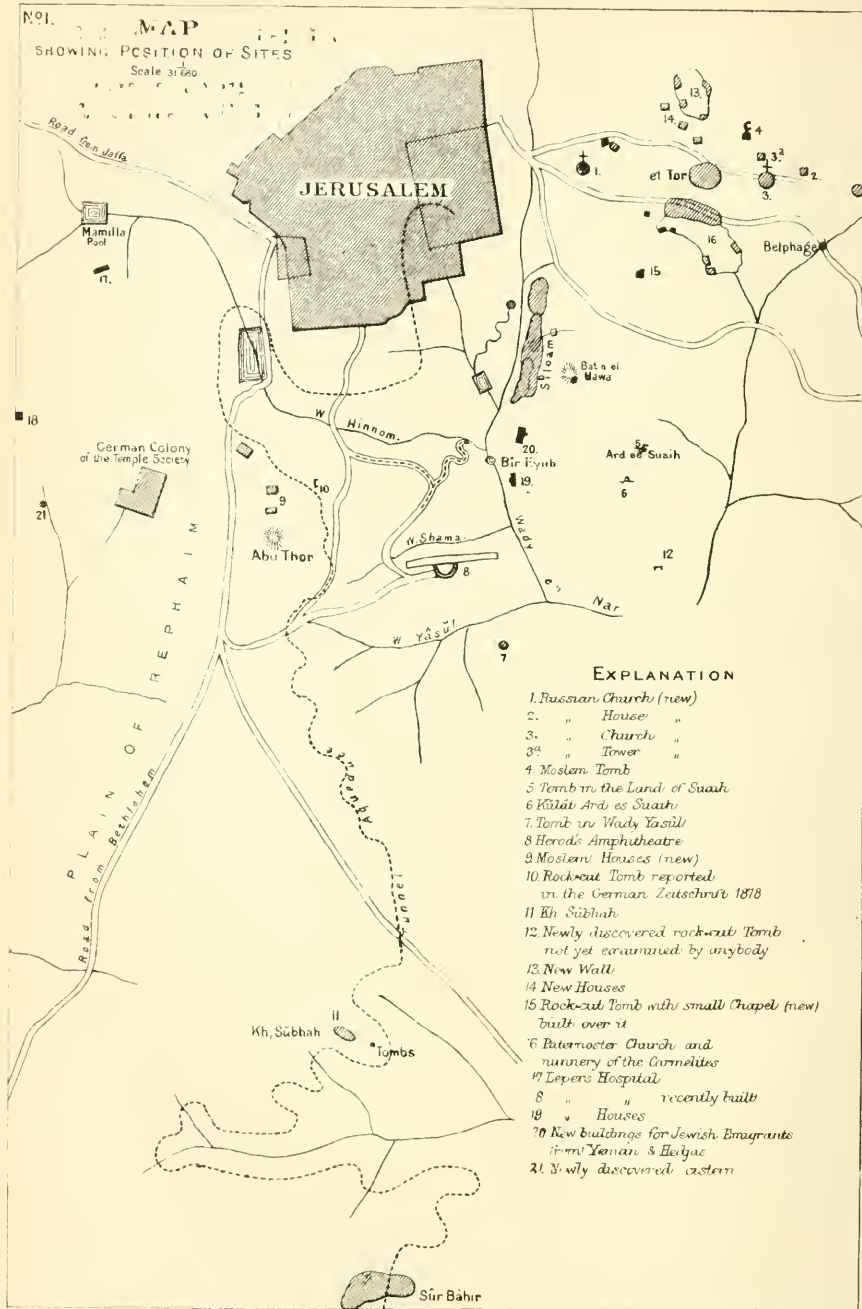
 identifies "mount Ephraim;" and in No. 89, 

   the Hagarites. He also suggests that the "Abel," No. 91, may be Abel Shittim, and the next "Abel," No. 92, with the determinative of high places, , may be Abel Mitsraïm.

In No. 101,    he identifies the great stronghold   taken by Thothmes, and agrees with de Sauley that this was a Beth-horon.

In the 'Amegu,   , No. 107, he sees עמק הברן, the

NO. 1. MAP
SHOWING POSITION OF SITES
Scale 31660



EXPLANATION

1. Russian Church (new)
2. " House "
3. " Church "
- 3^a. " Tower "
4. Moslem Tomb
5. Tomb in the Land of Suah
6. Kälät Ard es Suah
7. Tomb in Wady Yasul
8. Herod's Amphitheatre
9. Moslem Houses (new)
10. Rock-cut Tomb reported in the German Zeitschrift 1878
11. Kh Sübhah
12. Newly discovered rock-cut Tomb not yet examined by anybody
13. New Wall
14. New Houses
15. Rock-cut Tomb with small Chapel (new) built over it
16. Paternoster Church and nunnery of the Carmelites
17. Lepers Hospital
18. " " recently built
19. " Houses
20. New buildings for Jewish Emigrants from Yemen & Belphag
21. Newly discovered cistern

vale of Hebron, with which will agree a series of suggested identifications in the same part of the list.

All serious students of the topography of Palestine will give careful attention to these papers.

Mr. Tomkins hopes to contribute to the *Quarterly Statement* a series of short articles treating the Egyptian data in a detailed manner after the model of his articles previously printed in our pages.

NOTE.—Captain Conder's latest revision of his paper on the southern list is to be found in the volume of "Special Papers." Some twenty of Captain Conder's identifications have lately been adopted by M. Maspero.

NOTE ON QUARTERLY STATEMENT.

April, 1887.

Page 83. A statement is here liable to misconstruction: "Not only this ruin has been settled since the Palestine Map was edited, but also the following old sites." What is meant evidently is, that the places have become *inhabited*, not that they have been *discovered*. All these places here mentioned are on the map. As to the variations of spelling noted by Herr Schumacher, it is also to be noted that they have no *radical* difference. We frequently found the names of places to be differently pronounced by different people.

NOTES FROM JERUSALEM.

Jerusalem, March 15th, 1887.

1. About three weeks ago, when coming home from the town (I am living outside the town), a servant of the Russian Archimandrite was waiting for me with a message from his master to come down to Gethsemane, in order to examine a newly opened cave. There, under his direction, the Russian Emperor is building a little church, and in order to get more free space round it towards the hill, the rock was broken away, and by this a rock-cut tomb was discovered, of which I afterwards made the measurements. On arriving I was told that the Archimandrite was on the Mount of Olives, where he is building a very high tower or

belfry. He took me into his room and showed me his own sketch book, and in it a drawing of the newly discovered rock-cut tomb near Gethsemane. It bears an inscription, and reading the name Stephanus, he ordered me to go there and make a search for myself, and to copy the inscription. This I did. The result I give in the enclosed drawings.¹ It was apparently a Christian tomb, never a Jewish. Jewish tombs are always individual, separated from the other; not so the Christians, they are brothers, and hence even in death joined together. The cave is inside 12 feet long by $5\frac{1}{2}$ feet broad, and with the troughs about 6 feet high, cut entirely in rock, which is very soft, and partly now decayed. On the slope of the ground an opening was made 1 foot 6 inches high and wide, rather in the roofing of the cave; the cave has no ceiling, but the rock forms a kind of vault, as will be seen by the sections. The opening was shut with a stone slab, and the passage on its top covered also with two slabs and over them earth. There are inside seven tombs or troughs from 5 feet to 5 feet 10 inches long; they are cut into the rock, and the partition walls between them are very thin, only 4 inches. They are seven in number, and over the third, counted from the east, is on the rock wall an inscription in Greek with a cross engraved in the rock; but all is so brittle and soft that no squeeze could be made; I made however a careful copy. As there are seven tombs, and over one is the name of "Stephanus," my man who was with me reminded me of Acts of the Apostles vi, 5. It is interesting, but the connection cannot be proved.

It is rather remarkable that the greater part of new discoveries at Jerusalem are tombs.

2. I have to speak of another opened tomb, of which I also enclose plan and section.¹

Situation.—When one passes the garden of Gethsemane going southwards, on the brow of the Mountain of Olives, to the point where the road bends eastwards going to Bethany, do not follow this road but go straight on, and you will come to a path running up from the upper part of the village Siloam and following it in a south-eastern direction, one comes to an old cistern, marked on the Ordnance Survey Plan, scale $\frac{1}{10000}$. Going from there downwards (towards south-east) one comes to the point with the bench mark 2111-2, there or near by it is the said tomb, called "es Suaih," and the field there round about is called "Land of Suaih" السويح signifying the traveller or pilgrim.

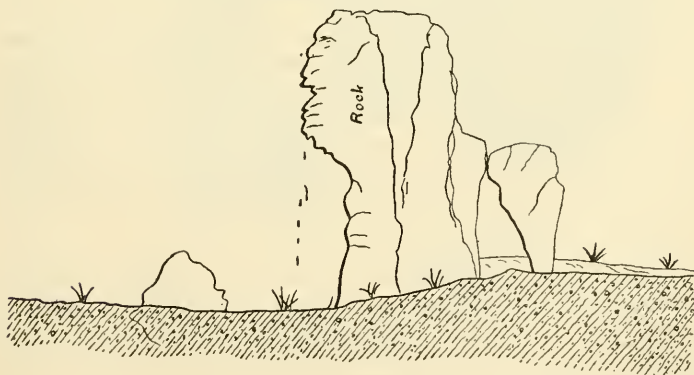
Description.—The entrance hall has for the greater part disappeared; a wide opening (4 feet wide and about 6 feet high) leads to a room $11\frac{1}{2}$ feet broad and $(16 + 14\frac{1}{2} = 30\frac{1}{2})$ average 15 feet 3 inches long, and 7 to 8 feet high; the ceiling is nearly horizontal, the walls perpendicular; towards the west is an unshaped large recess. A wall, partly still existing, of very fine hewn stone divides the recess from the main room. But this wall is only half the height of the room, and looks like an altar or something similar.

¹ Not engraved; preserved in the office.

Close under the ceiling there are in each corner narrow deep holes bored in the rock, as for fixing in hooks or nails. Also between the corners on the three sides are such holes. It gives the impression that once the room was decorated with hangings or carpets like the birth chapel of Bethlehem. And very likely in front of the wall was also a hanging, perhaps not down to the bottom, so that the altar bench might be seen. If this room was at that time not a regular chapel, it was the lodging of a holy or religious person, the sleeping place behind the wall in the recess. On the eastern wall is a door opening like at other tombs, only a little more high, so that one may go in without great difficulty. Immediately inside to the left is a trough or tomb, and to the right three loculi, and under them seems to be some others, and opposite the door a stone bench, and also three loculi; going in (eastwards) the room is only on an average 8 feet long and 6 feet broad, and about 6 feet 3 inches high, ceiling horizontal, so there are eight or nine (perhaps ten) tombs. There is a good deal of earth now in both chambers. The name of the place and the former decoration of the room with its wall, etc., indicates that in the Christian time before the intruding of the Mohammedans, a holy man lived there as an Anchorite, and very likely formed at the same time a station for the pilgrims, and I suppose it might be mentioned in one or the other of the old pilgrim books. As the real name is lost we can only guess about it; the present name is certainly a new one given by the Mohammedans. Originally it was a *Jewish* tomb, and probably in the early Christian time it was known who was buried there (which is now forgotten). Then it was made into a chapel by the Christians, inhabited and watched by a monk or such devoted man: it may be that this was in the Crusaders' time, if not earlier; from this the modern name comes.

3. South-east, about 400 feet distant, higher up on the hill and just on its ridge, is a curious isolated rock, called "Kūlāh Ard es Suaih," *i.e.*, the castle or fortress of the ground es Suaih. It was formerly of huge dimen-

KŪLĀT ARD ES SUAĪH



sions, large particles have fallen off, and are lying on the ground round about. It consists of a conglomerate of flint pebbles backed together with marl and soft limestone. The marl gradually becoming by the winter rain washed off, and the lime by frost and heat decaying, the rock became gradually smaller and smaller. At present it is about 14 feet high, on an average 7 feet to 8 feet thick, and about 21 feet long, standing from north to south. Its eastern side has a concavity; on its western side one may go up to its top, which is comparatively even. Such rocks are found at several other places: on the Mount of Olives and the hill of Evil Counsel, and near Mar Elias, always resting on a strata of chalk and lime, but I have not found elsewhere such a high and isolated one, for which peculiarities it is remarkable.

3. According to your desire, I have cleared out the caves or rock-cut tombs in Wady Yasul (see *Quarterly Statement* for April, p. 112), but no opening was found leading into the room where the large stone case is standing. My workman had the idea of enlarging the small opening through which the sarcophagus (?) is seen, in order that a thin man might go in and find out the contents of the inside, and the situation of the opening through which the sarcophagus was brought in. But it failed, the rock being so moist and brittle, when struck with a chisel and heavy hammer, a large piece gave way and now lies so that all further work from this side is in vain, and at the same time I fear we might by going on do mischief. But continuing the examination I found that from the cistern an opening now walled up is seen, but we could not open it as the cistern is now full of water, and all the rock so wet and moist that it is dangerous to do much, so I put off further excavations to a dryer season, when the cistern is empty.

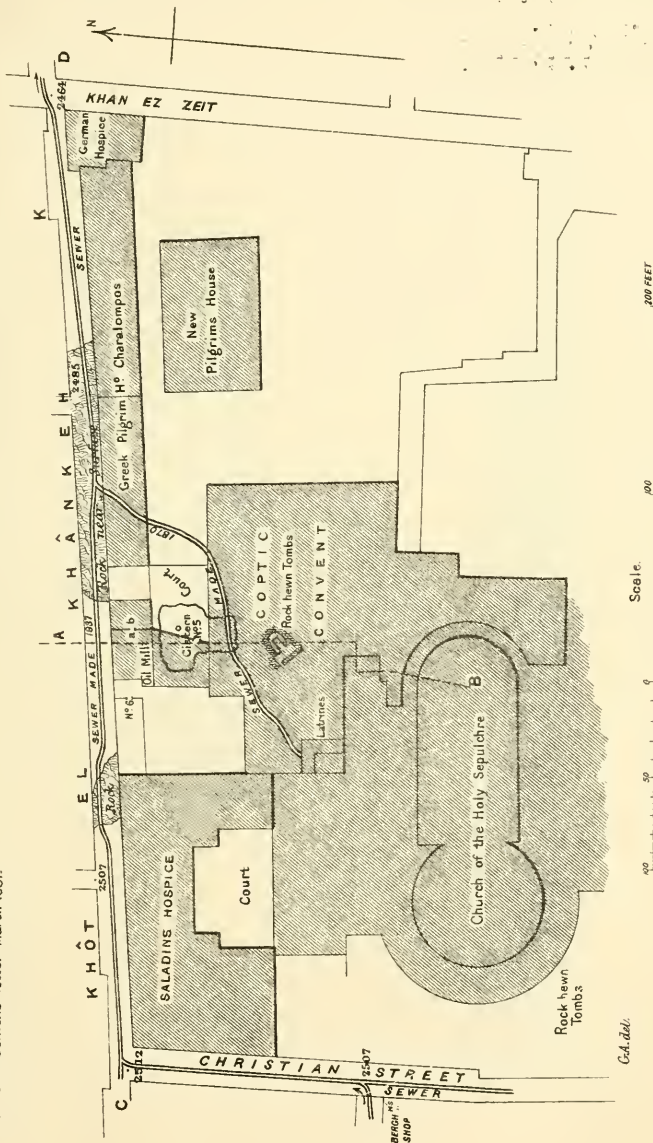
4. During my residence in the Holy City I have always kept an eye upon the excavations that have been made, chiefly for foundations and have thus found out a great many rock-levels inside the city.

About twenty years ago, when excavations were made for the foundations of a new building near the German Hospice (at K on plan), rock was found 36 feet beneath the surface. Some years later the latrines of the Church of the holy Sepulchre were altered and a sewer made north-eastward, beneath the Coptic convent to the street Khôt el Khânkeh. It was then found that beneath the Coptic convent the rock is only one or two feet below the flooring of the basement rooms and so on to the Khôt el Khânkeh; the sewer had thus to be cut in the rock as far as the middle of the arch which spans the street at the Greek Pilgrim House, Charalompas; there the rock ends and the continuation of the sewer eastward was built in the rubbish.

Two years ago, in April, 1885, the Coptic priest, when excavating to make a new cistern beneath the convent, found rock-hewn tombs which I examined and reported upon (see "*Zeitschrift des D. P. Vereins*," 1885, p. 171). They are shown on accompanying plan and section, and prove the existence of rock-hewn tombs in this locality before the Church of the Holy Sepulchre was built; they also testify to the genuineness of the tombs in

JERUSALEM.

See Herr Schick's letter March 1887.



JERUSALEM.

See Herr Schick's Letter March, 1887

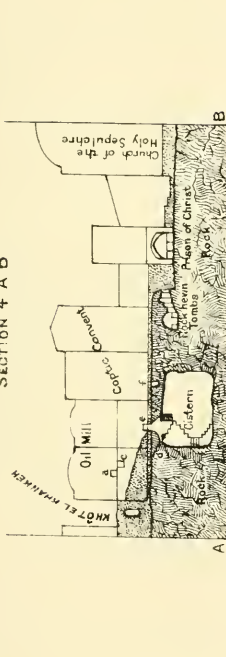
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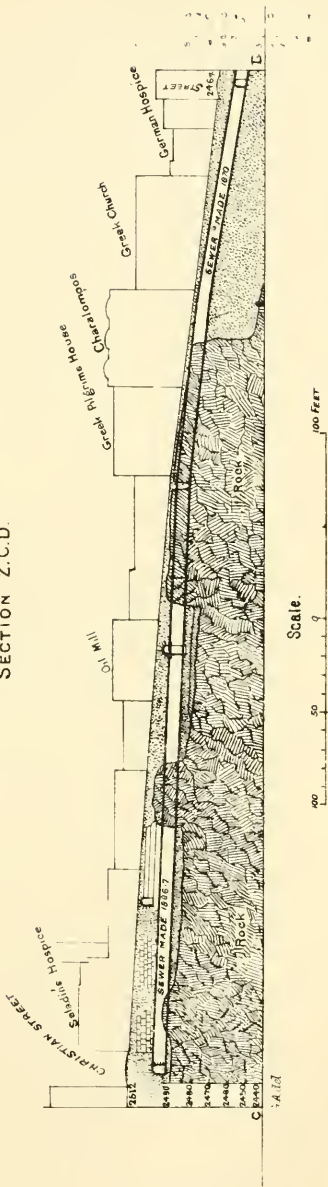
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SECTION 4 A B



SECTION 2 C D



the church west of the Rotunda. At the same time we ascertained the position of the rock there. During the last four months a new sewer has been made in the Harat en Nasâra (Christian Street), and Khôt el Khânkeh, so that the lie of the rock is also known there.

The sewer under Christian Street was made by working north from Mr. Bergheim's shop, and south from the corner of the Khôt el Khânkeh; at the former place its floor was 6 feet below the surface or 2,494 feet above the sea, and at the latter 22 feet below the surface, or 2,490 feet above the sea. The rock was struck in several places, but the sewer was not to be cut out of it, so no section has been sent.

The sewer in the Khôt el Khânkeh was made from east to west, commencing at the mouth of the old sewer made in 1870. For 63 feet it had to be cut out of the rock, or rather the existing sewer deepened; the rock then descended nearly perpendicularly (see section 2), and nothing was found but rubbish and small stones to a depth of 14 feet; the rock is perhaps 5 feet or 6 feet deeper than this. On the south side of the sewer the earth fell in and disclosed a door with lintel and window which was walled up. The men would not open it, but showed me a vault under the oil mill here, which I afterwards examined. At a distance of 62 feet west of the door the rock rises nearly to the surface, and continues near it for 33 feet; at this point the rock again descended, and rubbish and made ground were found; hard and red, not black like the previous made ground, and in part the original soil. Near the southern buildings there was a broken conduit made of good hewn stone. The main Khankeh building (Saladin's Hospice) has no proper foundations, its walls rest on the red earth, and even at the corner only go down 11 feet (section 2); the walls are built of well-hewn stones below ground, and the corners are right angles, not obtuse as above ground. Near the angle the rock is from 16 feet to 17 feet below the surface, and the sewer had to be cut in it a short distance.

These excavations show that no city wall (such as the second) ran along the line of the Khôt el Khânkeh from east to west. The excavations caused several cracks to appear in the neighbouring masonry.

In the oil mill a small window-like hole (*a*, see plan) leads to a small dark chamber (*b*) whence a small hole (*c*, section 4) gives access to a vault under the oil mill. We found a complete lower storey as shown in section 4, but much filled with earth. A low door (*d*) opens on to a rock-hewn flight of steps leading down to a large rock-hewn cistern, which I could not measure as there was water in it. Its mouth is at (*e*), where is a large perforated stone resting on the rock; the depth, including that of the stone, is 37 feet; or from the level of the court above 50 feet. In 1870, when cutting the sewer through the rock here, the workmen broke into the cistern, but closed the hole so as to avoid disturbances. The closed door on the north of this lower storey seems to have led into a sort of court and not into a street. It is clear that much stone was quarried in this locality for building.

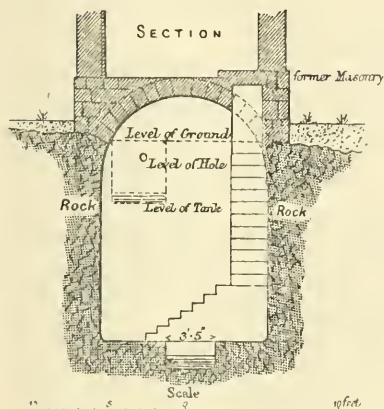
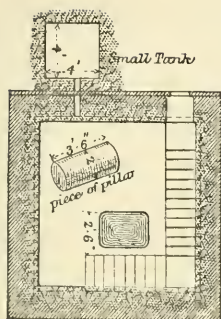
The lower storey discovered is a continuation of the lower storey of the

Coptic convent ; and the rock-hewn tombs (see plan and section 4) beneath this convent are nearly on the same level as the so-called "Prison of Christ" in the Church of the Holy Sepulchre. It is clear that the old masonry in the lower storeys of the Coptic convent and the oil mill are remains of the House of the Canons of the Crusaders. The principal entrance was from the church, where that of the Coptic convent now is ; but there was also one from the north. There is also a larger door on the east side. The building shows many restorations and additions, most of them badly done.

I have been able to do very little towards tracing the course of the second wall. I have determined to dig in the ditch of the castle to find the Gate Gennath, but have not yet got permission, and it is too wet ; I must therefore wait for the dry season. Digging in the houses and streets is most difficult, as people will not allow it except by chance. The damage done to so many houses in making the sewer has increased the difficulties, and made the people more afraid of excavations. The time will certainly come one of these days to go on with the work.

5. About five or six years ago there arrived in Jerusalem many members of Jewish families migrating from Yeman or the Hedjas and intending to settle in the Holy Land. They were nearly all very poor, and wanted the charity and assistance of Jews and Christians ; the most difficult point was to get lodgings for them. So for a time and in summer a good many lodged in the fields under trees or corners of garden walls, etc. ; but this would not do for the colder season. So some Jewish residents bought a very rocky piece of ground south of the village Siloam, about one-third high up on the side of the high hill east of the Siloam gardens in the Kedron Valley and Bir Eyûb. A number of rooms were built, first a lower or ground storey against the cliffs of the rock, which formed the fourth side of each room. Later on an upper storey was built on them, the entrances to the rooms for those were from the east, as for the lower storey are from the west. There are twenty rooms, smaller and larger, and over the entrance door is written in Hebrew the name of the benefactor or builder of the room. Each room is intended for one family, but in some there are now even two. To each room belongs a free space or little court to enable them to make there at the Feast of Tabernacles the "Succoth." On the south there are three rooms below and three above, but then No. 7 and 8 are only two below, as in the upper storey four are built on them. Water the people fetch from Bir Eyûb. A road leads down from the building to the valley.

6. In May, 1886, the proprietor of a piece of ground in cultivating it, taking out from the ground stones and working over the soil to some depth, he found the edge of the rock hewn in a straight line, and when going down on its side, and round about, found rock-hewn steps and a depth of 13 feet. As he wished to make a cistern, this pit was just fit for his purpose, and he therefore cleared it entirely ; many hewn stones were between the *débris*, and also a piece from the shaft of a round pillar 3 feet



6 inches long and 2 feet diameter. The steps have a bending and go down to the bottom, in which there is a square sink 1 foot 9 inches deep, 2 feet 6 inches wide, and 3 feet 5 inches long, the flooring of the whole a little declining to it, so even the last drop of fluid could run into this hole. The pit at the top is 11 feet long and 10 feet 8 inches broad, at the bottom something wider, 11 feet 6 inches each way. On the eastern side a round hole hewn through the rock is in communication with a small tank also hewn in the rock; it is square and 4 feet each way and 4 feet 6 inches deep; the above mentioned communication hole being 2 feet 10 inches above the flooring. As hewn stones were found, and other indications showed that one of the pits was arched over, and very likely upon it stood a room in which there was flooring, there must have been a hole in order to draw up the fluid below. This hole I suppose was just over the hole in the bottom. The pro-

prietor of the ground arched it again and made use of it for a cistern, and the small tank is now the filtering "hod" or pool. The question arises, What was in ancient times this pit used for? Some think that it may have been a swimming bath, used in that way till the water was gradually used up for gardening purposes. This may be, but I think it was a store for oil. The pillar stone may then have been used as the crusher of the olive berries, and when the place became destroyed cast into the pit. But if it was a bath, one of the walls of the chamber on the top of the pit may have been partly open like a porch with two pillars, and the whole covered with a little dome, as the upper building was a complete square. And if it was a bath, it wanted also some light, which then very likely fell down by an opening in the roofing above the stairs. When used for oil nothing of the kind was wanting, but as much as possible it was desired to shut up against light and air. The steps were necessary so that one could go down and clean the hole again when the good oil was all drawn up by a bucket through the opening in the roof. If it was a bath there must have been

near it the country house of some wealthy man, which certainly may have been the case. If it was an oil magazine it proves that in that time a good many olive trees must have stood here in this upper part of the plain. At present there are none, except those in the Greek gardens, to the north and the German colonists in the north-east.

7. The piece of Russian ground lying east of the Court of the Holy Sepulchre is a block of ground 37 feet from north to south, 36 feet east to west, and 14 feet above the level of the street. It seemed, before it was examined, to be a mass of earth facing the street towards the south and east and retained by walls, but towards north and west leaning against other buildings. Grass was growing on the top, and no opening or entrance was recognisable except a walled-up or closed arch in the northern building used as a magazine. Recently the earth has been removed, and under it various ruins have been found. Concerning these I have made the following notes :—

The magazine and buildings adjoining are ancient and of the same period, but have undergone considerable changes.

Six piers were found, two supporting a fine arch of nicely hewn stones, the other four, larger masonry and well cut, the support of a vault, the roof of which is now fallen in ; they appear to be of the Crusading period, as they are similar to those in the Muristan and elsewhere.

A drain was also found, which passed under the buildings and pavement of the street.

Other ruins of walls and vaults were exposed, but of a later period, and there is still a heap of *débris* remaining to be removed later on.

From the position of the piers, vaults, walls, and arches we have, evidently, masonry belonging to three different periods.

The rock was not found, but I believe that it is not far from the surface. Probably the rock will be laid bare when further improvements are made.

C. SCHICK.

A JERUSALEM CHRONICLE.

Jan. 1, 1886, to March 31, 1887.

THE municipality of the city has arranged with the hitherto proprietor of the ruined church and convent of Maria Mogadolio, generally called Moumnich, in the north-eastern Mohammedan quarter, and took it over from him. He had there a pottery and brick establishment, which as they now import these things from France is done away with. The municipality has now destroyed all that is above ground, and a new building will be erected for a Mohammedan school. I have been there, but found nothing remarkable. I was not able to visit the arches below, but the workmen and the foreman of the work tells

me there is, except large vaults, nothing of interest there. I will try to go in. But the Moslems will not like it, they are rather jealous, and try to do away with any sign or mark from former Christian works or buildings.

To bring in easily new stones to the new building, the closed door Bab az Zaharieh (or Herod's Gate) is now opened; and the stones are broken from the rock outside the wall, where the wall makes a bend inwardly, south of Jeremiah's Grotto.

Opposite (north) to the north-east corner of the Muristan, the Russians have a piece of ground, which was a ruin looking like a heap of earth, just where the letters C H I N on the Ordnance Maps (1864-65) scale $\frac{1}{2500}$ stand. West of it is now a large new building belonging to the Greek priest of the Holy Sepulchre Church. This piece of ground has been cleared and all the earth removed outside the town, and some masonry of two or, as I think, of three different ages was found, although of no great interest, of which I will send a plan with some notes (see p. 158).

The Russians are developing a great activity in erecting new buildings. On the Mount of Olives during the last ten years a church has been in course of construction. It is now finished; and a small convent or pilgrim-house, trees planted and new roads and arrangements made there, and above all on the highest point of Olivet a square tower is erected, already brought up to a considerable height, quite a new feature of the holy city; it will be four stories high, of which three are already done, and it is hoped that on its top the Mediterranean might be seen. About twelve bells are already fixed up in it.

About 400 feet south-east from the Garden of Gethsemane, higher up the brow of the hill, and in the middle between the two southern roads going up unto the mountain, the Emperor of Russia and his brothers are building a small but beautiful and costly church as a memorial of their mother; it has greatly advanced, and is already near the roofing. The style is strange to us, decidedly Muscovite, and will have seven towers with onion-shaped cupolas. A little higher up they have made a very large cistern, the greater part above ground, built against a cliff of the mountain, so it looks like a building without windows and doors, having only one (somewhat concealed) in order to be able to regulate the running off of the water, when wanted, for any purpose, especially for gardening purposes.

In the Kedron Valley they have bought several of the rock-cut tombs.

At their large establishment or settlement on the height north-west of the town, they have bought outside their boundary wall a large fresh piece of ground, and on it are now erecting new pilgrim-houses, as those inside their enclosure is not sufficient, the latter being under Government rule; the new place is bought and made by the Russian Orthodox Palestine Exploration Society, of which Grand Duke Sergius, a brother of the Emperor, is president. They not only explore but build also churches and pilgrim-houses, and it seems they have plenty

of money. As the new place adjoins the old, they have made a new door in the boundary wall.

The Abyssinians have built a large round Church, very nicely and at great expense ; it is completed up to the roof, but the money has come to an end, so the priest started last week for Abyssinia in order to take reports and photographs of those things which have been already done to the King, and to ask for more money to finish the work. It will be covered by a dome, in a similar way to the Dome of the Rock. I myself made the plan of it, and it stands only a few hundred feet distant from my home. It is unlike the Dome of the Rock in the inside, as there is no rotunda, but there is a square place separated as the holy of holies, round which are two passages or round aisles, and curiously no door has to be opposite the other, so one cannot look straight into the innermost part when the doors are open.

This year we have had a good deal of rain, much more than in some years previous. It fell on 23rd January and lasted for about a week, and on the 10th February snow lay on the higher mountains beyond Bethlehem, and for several nights there was frost, and even thick ice, which damaged the roofings and walls of the houses greatly ; also the trees suffered.

On the 14th February the Crown Prince of Italy arrived, and stayed six days. Two arches were made over the street, one made by the Jews. It was situated 1,350 yards west of the Jaffa Gate, the other 300 yards nearer to the city by the Italians, of a Roman architectural design, from wood and canvas or cloth, and on it stood a figure made of pasteboard and gypsum, representing Italia, stretching out one arm, in her hand a laurel. When the Prince arrived it was a fine day, and the whole population of Jerusalem went out, standing and sitting on both sides of the road from the gate, for more than 2,000 yards. All the house tops, windows, balconies, garden walls, and town wall near the gate, were crowded with people. Soldiers kept order. On Sunday the 20th February the Prince left and went northwards.

In regard of examining the rock-cut old channel on the ground of the Dominicans north of the Damascus gate, the superior of their order had been here, and I had an opportunity of speaking with him on the subject. He promised me that he would speak to the master of the ground, now residing in Paris ; he will, perhaps, give me leave to excavate. May he fulfil his promise !

The old parapet wall of the ditch of the castle was broken down, and a new one erected of lower dimensions, so the place looks much more in order, and one can see much better each stone of the castle, especially those in the lower layers, on which I hope some day to report.

C. S.

HEROD'S AMPHITHEATRE.

JERUSALEM.

JOSEPHUS, in "Antiq.," xv, 8, §1, says: "Herod built a theatre at Jerusalem, as also a very great amphitheatre, in the plain (outside town), both very costly works." Hitherto neither of them has yet been found or discovered, and the finding of their sites is a problem up till now.

Some years ago it happened to me, when standing on the high heap of rubbish overtopping the town wall (inside of it, and north of "Burj Kibryt") east of "Bab en Nebi Daud," looking southwards into the now green and lovely country, I observed on a hill side an encircled hollow, which seemed to me to be artificial; a few Siloam fellaheen were standing near, with whom I had settled some business (a bargain for removing earth and bringing certain kinds of stones), I asked them if they could see such and such a place, pointing it out to them, and, when found, if they could tell me the proprietor of the ground. "Could you find it, when we go there?" I asked, and they said, "Yes." "Well, then, let us go there together and see what we may find," was my reply. We went out by the Maghrabeen gate, and down to the pool of Siloam and Bir Eyûb, and then up south-westwards to the top of the hill, and after some search we found the place. At once I saw that the cavity is artificial, and thought that perhaps it was Herod's Amphitheatre! But to prove this assertion excavations were necessary. I mentioned this find to several persons, especially to Dr. Chaplin, verbally, and by writing to Prof. Guthe, at Leipzig (in Germany), the Secretary of the German Palestine Exploration Society, but not telling the latter the *situation*; instead of giving me orders to excavate, he said in his answer: He had also found the site when making his excavations at Siloam, a few years before, and found it strange that I had in my letter not mentioned the exact *site*, as he knows it is a little south of Burj Kibryt. As this is not the case, I understood he wished only to preserve for himself the priority, and as he did not beg me to do anything, I did nothing more in the matter. Dr. and Professor Euting, of Strasburg, also visited Jerusalem, and my son-in-law was travelling for a short time with him, so he told Euting of my find, and guided him to the spot; he picked up the same idea of having been a theatre, but said that excavations ought to be made, and when done, he would be glad to hear of its result, but gave no order to do it on his account, and so my son-in-law tried to do something, and had an idea to purchase the ground, but his endeavours led to no result. He got the proprietor to dig in some places (in the arena), in hopes of finding the pavement of the arena, but without any success. I paid him his outlay, hoping that the time will come when I shall be able to recover my expenses. So for some years nothing was done till recently, when the English Exploration Fund sent me some money in order to enable me to undertake excava-

tions, &c., when opportunity should arrive. So I determined at once to look a little more seriously into the "Theatre." I have now made the necessary measurements and some excavations, so that I am able to make a plan and sections of the whole, which are here inclosed, and to which I add a few words of explanation.

No. 1. Is a map or plan, showing the situation or site of the amphitheatre, and several other places. It is on a double-size scale of the large map.

No. 2. A plan of the Amphitheatre.

No. 3. Elevation and sections from north to south of the middle and *western* part, according to the lines A, B and E, F of plan.

No. 4. Elevation and sections from north to south, middle and *eastern* part, according to the lines in Plan A, B, H, M, K, G, and M, I, L.

No. 5. Elevation and sections from east to west, according to the lines C, D in plan.

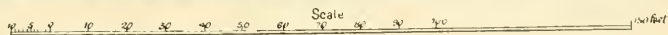
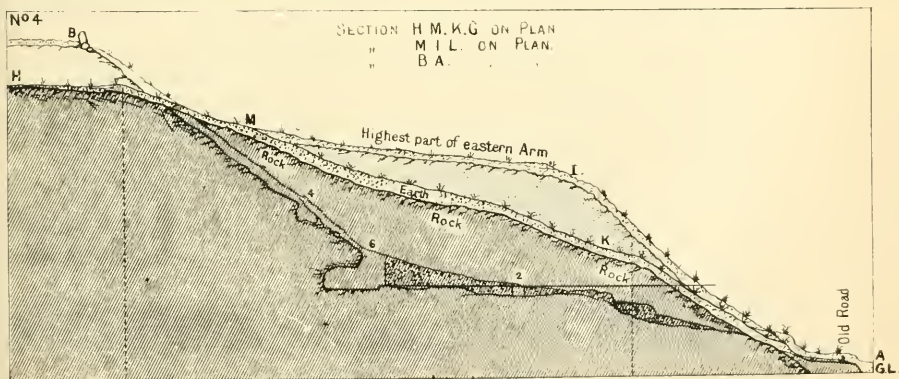
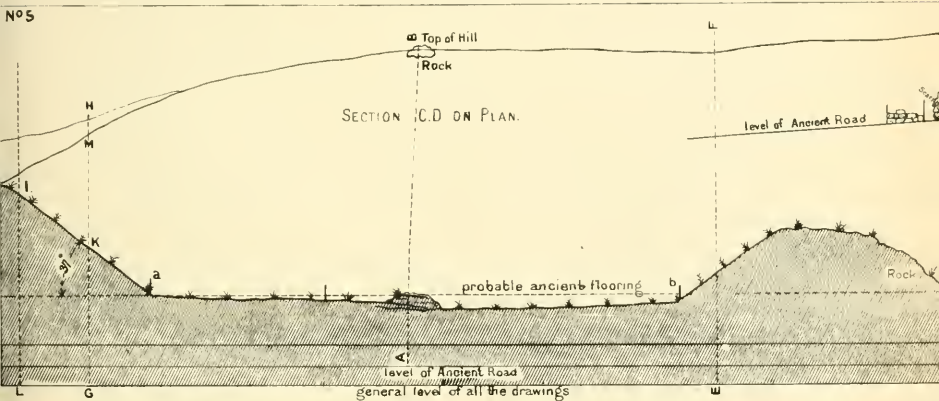
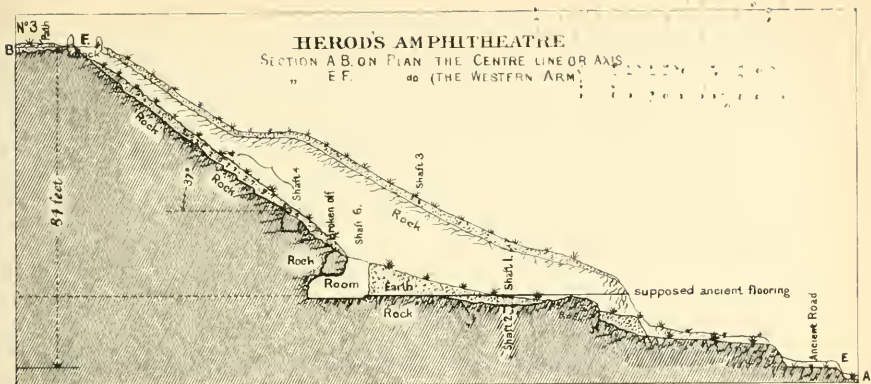
No. 6. Plan, sections, side views, &c., of details found in the neighbourhood.

This theatre (as will be seen on the Map No. 1) is situated on the northern and steep slope of a hill, between the two valleys, "Wady Yasul" on the south, and "Wady es Shama" on the north, both going eastwards and falling into the Kedron Valley or "Wady en Nar." This hill is called "Er Ras," and is higher than the spur of the Abu Thor mountain, falling eastwards down to the Kedron, on which the necropolis is found together with Aceldama. So one could not only on the top of "er Ras," but even on the whole slope where the theatre is situated, see away over it and the whole city. On any former seat of it, one could see the top of the Evil Council Hill (Abu Thor), the present windmill, the Protestant Cemetery, Nebi Daud, and the town wall as far as the south-east corner of the Haram, and all that is now outside, with the depression of the Tyropeon, the Pool of Siloam, the Ophel, Kedron Valley up to Gethsemane, the village of Siloam, the Mount of Offence, and top of Mount Olivet. So that the spectators in the theatre had, at any rate, at the same time a very nice view before them.

The hill consists to the greater part of very soft limestone, in which the amphitheatre is carved, and what was wanted besides it had to be built by stones, which when existing in greater extent were afterwards again removed, and small traces of it may now be found.

The layer of earth covering the rock is not very thick, shafts for examination of the rock were made; in the rock the seats are, as a kind of steps, still recognisable, although in the course of centuries very much worn and decayed.

The slope to the horizontal line is still easily to be measured, and makes on all three sides, west, south, and east, 37 degrees. This observation, and that the roundness is exactly a half circle, convinced me fully that we have here Herod's Amphitheatre. I hoped to find the flooring of the arena, but it is destroyed, and I have found nothing of it, as the ground was always cultivated and trees planted, but not so on the



slopes, being too steep. It may be that the flooring of the arena was not paved with stones, perhaps simply a concrete, or a similar flooring, more fit for the games, and hence no traces can be found of it. Also its real altitude cannot exactly be fixed, but it must have been a little higher than the top of the rock, cropping out from the ground in the middle of the arena, nearly the centre of the circle, which is a little north of it (as seen in the drawings). North of it the ground is falling in two steps to a distance of 40 feet from this deepest point, to the highest, on the top or brow of the hill, I measured the height to 84 feet (see No. 3).

The bearing of the axis is toward *north*, 6 degrees west, on the line of the northern face of the theatre (the full diameter) 264 degrees, very nearly the same as the theatre Akud (265 degrees) at Scythopolis.

Before I speak of the measurements I will say a few words on the shafts I made.

Shafts 1 and 2 were made to find the flooring of the arena ; but except the rock, nothing was found.

Shaft 3, after a few feet, rock was struck, and traces of steps found in a line with the circle.

Shaft 4 was rather a trench 26 feet long, and the rocks for that length were laid bare. Here the traces of former steps were distinctly visible, and in an exact straight line of 37 degrees to the horizon. At the lower end (of the trench) was a kind of cavity with an even flooring, and about 5 feet wide, on the upper side, also about 5 feet high. From this (upper) edge the slope upwards for 9 feet 7 inches is a smooth rock, without observing traces of former steps, but after 9 feet 7 inches were steps measuring in the slanting or slope line, 2 feet 7 inches, 2 feet 7 inches, 1 foot 9½ inches, 2 feet 1¼ inches, and 2 feet 1¼ inches.

Shaft 5. When at a depth of about 7 feet deep rock was found, and tracings of two steps on it were seen, but nothing else of importance. As I wished to find the lower limit of the steps, and the beginning of the arena—

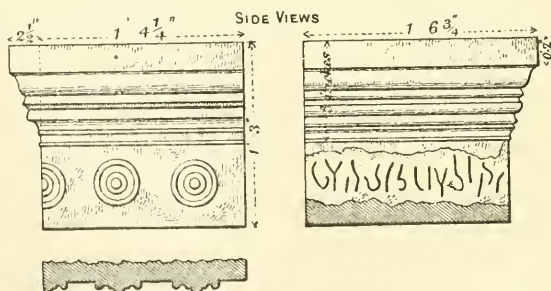
Shaft 6 was made, where at an average depth of about 10 feet, the rock was found as an even, horizontal flooring, with a 5-inch step leading into a cavity or small room with a sloping roof, 6 feet wide by 14 feet long, and in height about 6 feet or more (see Section 3). The rock was so brittle that a few days after, in which a heavy rain had fallen, I found the roof broken and fallen in.

As the proprietor of the ground now raised difficulties and objections to further diggings, in hope of getting a much higher pay than I had promised him at the beginning, and as I thought I had seen enough to prove Herod's Amphitheatre to have been here, the shafts were filled up, and so ended the work.

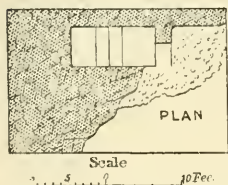
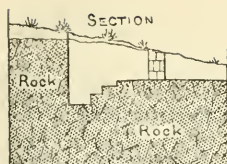
The measurements I made in the following manner :—At *a* and *b* (see Nos. 2 and 5) I placed poles and measured the straight line between, which I found 136 feet long, so the half diameter would be 68 feet, but I have reason to believe it is only 66 feet (this is the measure to the step mentioned in Shaft 6). So the arena would have contained 6,830 square feet.

To the north, although the ground falls in two terraces or steps, it seems to have belonged to the theatre, from the centre point 40 feet wide northwards, where there is a straight strip of land, which certainly has been once a road about 15 feet broad, going eastwards (from the axis of the theatre) 246 feet, ending in east abruptly on the side of the hill at some height up. I could not observe any tracing of its continuity. Steps may have been here leading down to the bottom of the valley, or was this road simply a place for running at the games? I cannot tell. Westwards from the theatre it comes into the bottom of the valley, and there a little higher up a similar road crosses the valley on some higher level, going thence north-eastwards to the brow and top of the northern hill, from which a branch of a road leads down to the widening of the valley near Bir Eyûb, and another branch goes north-westwards over Aceldama and to the road which crosses the Hinnom Valley. I show this with dotted lines on Map No. 1; but have to remark that cultivation of the ground for many centuries has obliterated the greater part, and so the tracing out is made with some difficulty.

Half way, or rather more than half way up, on the western limb of the theatre, comes another road, which can be traced up to the aqueduct and farther on to the Bethlehem road (see No. 1 and No. 2), which is still in use, with the exception of that coming down from the aqueduct. It does not go into the theatre, but girding its upper edge (as seen on No. 2). Here the top of the hill is even, and not very broad; at about 200 feet, the southern slope begins. At about 150 feet south of the upper edge of the theatre the ground was recently dug, and trees planted. Here a number of hewn stones were found. One with fine sculpture, and a



kind of inscription. It is a pity that the fellaheen, in order to make the inscription more visible, have rubbed it out with flintstone, and so, perhaps, some damage was done. These hewn stones prove that once a building had stood here of some importance. Close to this spot is a kind of pit, or small tank, cut into the solid (hard not soft) rock. It is $5\frac{1}{2}$ feet wide, 9 feet deep, in west, and then the flooring goes on in



3 steps, and to its eastern wall $10\frac{1}{2}$ feet long. The latter is 2 feet thick, partly now destroyed, and in front of it, is the rock smoothed and even—a little distance off it there is a rock-cut cave.

The top of this hill, called "Er Ras," *i.e.*, the Head. This means not the hill-top—as in that case all hill-tops might be called "Ras," which is not the case, only when they are really the crowning part of something else besides the hill sides. So I think it means here the top or head or crowning part of the theatre. "Wady es Shama," on which southern side it stood, means either valley of the "Wax Candle," or of the pier or pillar—and so in time of old, such

a one or more may have once stood here, and hence the present name of the valley.

The limits of this theatre can now be fixed with some certainty. But I think, as already stated, the diameter of the arena circle was 132 feet, and in proportion, and also the present condition of the ground shows the diameter to the outer boundary lines must have been about 200 feet. In the theatre at Ma-mas (see Vol. II, page 66) the arena has a diameter of 120 feet, and the outer 195 feet. This at Jerusalem was therefore a little larger. At the Akud theatre at Beisan, or Scythopolis, the diameter is 197 feet, and as the Vomitories took $50 + 50 = 100$ feet, the arena diameter, at the most, was 97 feet; hence it was something smaller than that in Jerusalem. It could therefore rival not only those above mentioned, but also the one in Gerasa, and others, if not with the one at Amman, east of the Jordan. The one at Caesarea (on the sea shore) was even smaller. So Josephus may call this Herod's Amphitheatre, with some right, as "a very great" one. This expression included at the same time the "Theatre" Herod built in the City of Jerusalem itself which must have been much smaller. As we now know the size of the greater one, we may form some opinion as to the size of the theatre in the town, which had an arena of perhaps only 50 feet in diameter. This will be a leading point when searching for its site. There are now two places suggested on which it might have stood: the one suggested by Sir Charles Wilson south of the Aksa, and the other suggested by Prof. Guthe south of the "Burj Kibryt."

In regard to the one outside the town, Josephus has, unfortunately omitted to tell us on which side it is. So that we are free to look for it on all the four sides, but as he uses a word generally translated by "plain," we cannot look for it east of Jerusalem, as there are no plains. On the north there are plains enough, but the spectators sitting in the theatre would not have a fine view before them. The site on which Dr. Riess suggested the theatre might be found, proved to have been the church and convent of St. Stephen. And further, as on the north everywhere

the rock and natural ground is visible, and there is nowhere any trace of a theatre, so it cannot have been on the north side. Towards the west one would look first for it. But hitherto no trace has been found, although the ground became, in the time of my stay here, cultivated, and made into gardens, and houses were built, etc., yet nothing of the kind was found. So we were obliged to look for it on the south side. That no trace of such an important and large building was found, some writers have taken it as a proof that the notice of Josephus is apocryphal—telling more than Herod really did—which is contradicted by my discoveries, and everything in favour of my site, except the words used by Josephus, when it positively means "*plain*," as my site is some distance from the plain (the largest plain in the neighbourhood of Jerusalem) and situated between the hills.

But one must remember that on a hill-side such an amphitheatre was much more easy to be made, and with much less expense than on level ground. Even the expression *Amphi-theatre* of Josephus seems to indicate this, as generally they were—though not always—but in most cases erected on hill-slopes, at least in all towns where hills were near enough; so I think Herod would follow also in this the Roman custom. And thus may the words used by Josephus, and generally translated "*in the plain*," have also the meaning—in the field—as we can see it was so in other instances; and when so used, then all things agree.

C. SCHICK.

REMARKS ON HERR SCHICK'S REPORT.

North Aqueduct.—The possibility of this going to Bireh was discussed while I was in Palestine. All the country has been examined frequently, but no traces of aqueduct found. It is a very rocky country, and the channel is pretty certain to have been seen on the surface had it existed. The survey party always looked out for and traced many aqueducts. I believe Mr. Schick's formed view to be correct: that the water was collected from surface channels near Jeremiah's Grotto.

No. 1 and No. 3 Tanks.—I do not understand how Mr. Schick has ascertained that "all is rock," and that the continuation northwards is "untenable." All the visible rock has been examined, but unless the platform has been removed and the wall and houses north of the platform pulled down, it is impossible that any facts can have been discovered to prove this statement. The remarks made do not seem to me sufficient to contradict the known fact that cistern No. 3 is closed on the north by a masonry wall.

Tombs near Golden Gate.—It is quite possible these may be Christian, but they might be Moslem if east and west, or might be burial places of

the numerous persons slain in the enclosures by the Crusaders, and other conquerors.

South of Ecce Homo Arch.—Is all this space now built over? If so, it is much to be regretted.

North Side 1st Wall.—Very likely the scarp is as far south as Mr. Schick supposes.

South Side 1st Wall.—The tracing east of the Protestant cemetery and the tracing of the aqueduct *west* of Pool of Siloam, are two of the most hopeful bits of work left to be done.

C. R. C.

THE TOWER OF EDAR.

I do not recollect, at this moment, whether Conder recognised and recovered this most interesting site which we meet once in the Bible text, and once marginally.

In Genesis xxxv, after the touching account of Rachel's death and roadside burial, we read that Israel, journeying Hebronwards (v. 21), "spread his tent beyond the tower of Edar." The LXX drop this verse altogether, and Josephus makes no allusion to it, probably on account of the incident mentioned in v. 22. In Micah iv, 8, we read: "And thou, O tower of the flock (Edar, marginally), the stronghold of the daughter of Zion, unto thee shall it come, even the first dominion; the kingdom shall come to the daughter of Jerusalem."

Now, why should "the kingdom," and what kingdom, come to this stronghold of the daughter of Zion—Jerusalem?

Further, St. Luke describes the apparition of "the angel of the Lord" to the humble "shepherds abiding in the field" near Bethlehem. Why should they be selected for this high honour, and why should the first words of John the Baptist, recognising the Messiah, be "Behold the Lamb of God," and what has all this to do with the "tower of the flock," Edar? Dr. Edersheim, in his delightful work, "The Life and Times of Jesus the Messiah" (vol. i, p. 186), gives us the answer: "That the Messiah was to be born in Bethlehem, was a settled conviction. Equally so was the belief that He was to be revealed from Migdal Eder, 'the tower of the flock.' This Migdal Eder¹ was not the watch tower for the

¹ According to Jerome it was 1,000 paces from Bethlehem. Smith's Dictionary *in re.* R. F. H.

According to Monks at Bethlehem it was in a valley half an hour eastward from Bethlehem. Robinson, vol. ii, p. 160.—R. F. H.

ordinary flocks which pastured on the barren sheep ground beyond Bethlehem, but lay close to the town, on the road to Jerusalem. A passage in the Mishnah leads to the conclusion that the flock which pastured there were destined for Temple sacrifices, and, accordingly, that the shepherds who watched over them were not ordinary shepherds. The latter were under the ban of Rabbinism, on account of their necessary isolation from religious ordinances, and their manner of life, which rendered strict legal observance unlikely, if not absolutely impossible. The same Mishna passage also leads us to infer that these flocks lay out *all the year round*, since they are spoken of as in the fields thirty days before the Passover, that is in the month of February, when, in Palestine, the average rainfall is nearly greatest. Thus Jewish tradition, in some dim manner, apprehended the first revelation of the Messiah from that Migdal Eder, where shepherds watched the Temple flock all the year round. Of the deep symbolic significance of such a coincidence it is needless to speak."

Now we can understand the King of the Jews, the Son of David, deigning to reveal Himself in His ancestral home; now we can understand the angelic mission to the shepherd providers of the pascal lamb as they watched their flocks around the tower of Edar, and the "haste" with which they repair to Bethlehem to see the Pascal Lamb, slain from the foundation of the world; now we can understand the inspired exclamation of the Baptist, "Behold the Lamb of God!" Micah's kingdom *had* come to Migdal Edar, the tower of the flock.

As to recovery of the site, I fancy the remains of the tower may still exist, probably on the road from Jerusalem, 1,000 paces from Bethlehem, and not at the Monkish site in a valley, half an hour east of Bethlehem. Writing thus far, I referred to sheet xvii of the Map of Western Palestine, drew a pencil circle (with an inch radius) around Bethlehem, and then carefully examined its interior. To the north it just cuts Rachel's tomb; three-eighths of a mile to the south-east of the tomb, is Kabúr et Tefál (tombs of Tefál) on a track.

In the centre is Bethlehem, and six-eighths of a mile to its east is Beit-Sáhúr (Beth-zur). No other site in the right upper quadrant of the circle; three and a half-eighths south and a little west of Beth-zur, is the well Bir Karan Gharí. In the north-west quadrant there is no site; two aqueducts run through the south-west quadrant, and below their junction is Ras esh Shababún.

On a nullah, three-eighths of a mile south of the Church of the Nativity at Bethlehem, stands a watch tower without name, and one and three quarter-eighths south-west of it is the site Bátn Fakús, two and a half-eighths, south of which is Hindági. These are all the sites within the Bethlehem circle. Now, does the nameless watch tower represent that of Edár? It is off Jacob's track to Hebron; it is within Jerome's 1,000 paces; it is in a valley, but not half an hour eastward from Bethlehem, according to the Monkish site.

I hope Captain Conder will kindly favour us with his opinion in this matter. Not knowing his whereabouts, I can only address him through the pages of our *Quarterly*.

R. F. HUTCHINSON, M.D.

JHANSI, *March* 5, 1887.

NOTE.—No conclusive identification of this site is, I think, recognised. Jerome's site is, perhaps, the Kenîset er Ra'wât, "Church of Flocks," east of Bethlehem—the old traditional Shepherd's Field. The watch-towers round Bethlehem are quite modern.—C.R.C.

POPULATION LIST OF THE LÎVÂ OF 'AKKA.

By G. SCHUMACHER.

The population of the principal places in Palestine was to the present date, in the absence of any census of official character merely an estimate one, as the *Dafâtir en Nefâs* دفاتر النفوس the "registers of souls" were based on such erroneous reports and contained such multitudes of false statements, that it was impossible to consider them as an authentic register, as even the spelling of the local names were apt to lead to infinite errors. At the beginning of 1886, one year ago, the Ministry of the "Travaux Publics," the *Adâret en Nâfa'a* at Constantinople, took up with praiseworthy zeal the reconstruction of the roads throughout the empire, a reform which had been already introduced during Midhat Pasha's government as Grand Vizier at the Capital, and especially executed during his time as Governor-General of Syria, but which had been dropped again until the date above stated.

The orders of the Administration of Public works were based on the following grounds: That the roads, "chaussées," were to be constructed in socage; that every male subject of the empire, from the age of 16 to 60 years, was obliged to do socage duty, and that foreign subjects were not exempted from this duty, for the general welfare of the country. This service was limited to an annual labour of four days for every person liable to socage, to work appointed by the engineer.

To perform these stipulations, the Government soon found that a thorough review of the census of population was urgent, and therefore induced accurate lists of every Mudiriye, Kaimakâmiye and Mutasarrifiye (Lîvâ), which are handed over to the engineer of the district, according to which he distributes the socage work. In the Lîvâ, or the so-called "Pashalik" of 'Akka, in the limits of which, the reconstruction of roads

was defined by the Authorities of Syria as "an urgent necessity owing to its importance," the lists or census were made with some care, and the work in the field began also and is still continued, but they soon proved to be unexact. As I had the superintendence of these public works within the Lîvâ, I caused a second thorough name list, which I for a good part personally controlled, and was supported by the envy of individuals in this function, as I was sure that no fellâh would perform his duty unless every capable soul of the village was also present. The counting up was therefore especially done with regard to the male members of a family, while the women and children were noted with less exactitude; the following list contains therefore in its first column the number of male persons liable to socage between the ages of 16 to 60, the second, the actual number of souls in the place; this last number was found to be exactly five times the amount of the socagers and this multiplicand (five) was thus found: I chose Tiberias and Haifa, as places of special study, took the "Mamûr en Nefûs," the employé with a number of Zaptiehs (police) and went from house to house, counting up every living human soul in a *Hâra* هارة (quarter), noting besides those members who were capable of doing socage work, and from this detailed inspection I found the above mentioned coefficient. The population of the cities of Haifa, Tiberias, and Nazareth was several times checked and is therefore as exact as possible; that of Safed is based upon the reports of the officials, as the fanaticism of the native Jews threw too many obstacles in the way of personal inquiry; 'Akka was partly checked by me, and I believe the number given to be trustworthy. The spelling of the names (in Arabic) are given according to the list gathered on the spot by the officials. They were, without exception, checked by me and such natives who have a thorough knowledge of the country, such as Tâbo and 'Ashâr (land-register and Tenth) officials.

NOTE.—A few alterations in the spelling of the names in English have been made to agree with those on the P.E.F. maps.

LIST OF POPULATION OF THE LÎVÂ OF 'AKKA.

لواء عكا

1. KADA OF 'AKKA. قضا عكا

Arabic.	English.	Number liable to Socage, acc. to Religion.						Total.	Souls.	Grand Total Souls.
		Druses.	Jews.	Maronites.	Latins.	(Kath.) Catholics.	Greek Catholics.	Moslems.		
نفس عكا حارات	City of 'Akka : (without its military force)---	..	..	..	..	..	..	337	1,685	
حارة المبلطة	1. Quarters : Hâret el Muballata ..	..	..	..	..	..	..	337	1,685	
حارة الشيخ عبد الله	" " esh Sheikh 'Abdallah ..	..	28	16	33	42	250	188	2,785	
حارة القاسمي	" " el Kâsimîyeh ..	..	..	..	..	..	..	141	705	
حارة الشخوص	" " esh Shekhûs ..	..	..	..	..	47	..	83	650	
حارة الشراشحة	" " esh Sherâshha ..	..	..	..	..	..	..	111	555	
حارة المجدالة	" " el Mejâdly ..	..	..	..	..	69	105	218	1,960	
حارة القلعة	" " el Kâl'ah ..	..	..	..	..	..	..	150	750	
حارة عين الست	" " 'Ain es Sitt ..	..	..	..	..	..	..	43	215	
حارة البساتين	" " el Busâtîn ..	..	..	..	..	..	..	19	95	
حارة قرية المنشية	" Kiryet el Menshîyeh ..	..	..	..	..	..	..	80	400	
									1,960 City of 'Akka..	9,800
										9,800

Kada 'Akka—continued.

Name of City or Village.		Number liable to Socage, acc. to Religion.							Total.	Souls.	Grand Total Souls.
Arabic.	English.	Druses.	Jews.	Maronites.	Latins.	(Kathik) Catholics.	Greek Catholics.	Moslems.			
قرايا ساحل عكا الزيب	2. Villages of Sâhel 'Akka (shore) —	..	..	..	..	..	..	146	146	730	
قرية عمتا	Kiryet ez Zîb ..	..	..	..	..	..	..	148	148	740	
قرية جديدة	3. " 'Amka ..	..	..	..	..	..	25	24	49	245	
قرية نهر التل	4. " Jedeyidch ..	..	..	..	..	..	..	55	55	275	
قرية الغابسية	5. " Nabret Tell. ..	..	..	..	..	..	..	78	78	390	
قرية المزعة	6. " el Ghâbsyeh ..	..	..	..	..	..	..	37	37	185	
قرية شيخ داود	7. " el Mezra'h ..	..	..	..	..	..	..	64	64	320	
قرية صحر ياسيف	8. " Sheikh Daûd ..	..	..	..	..	..	145	37	182	910	
قرية يركا	9. " Kefr Yâsîf ..	256	..	..	..	1	..	..	257	1,285	
قرية سميرية	10. " Yerka ..	..	..	..	..	..	..	54	54	270	
قرية مكر	11. " es Smeiryeh ..	..	..	..	..	..	..	35	56	280	
	12. " Mokr ..	..	..	..	..	18	3				

Kada 'Akka—continued.

Name of City or Village.		Number liable to Socage, acc. to Religion.							Total.	Souls.	Grand Total Souls.
Arabic.	English.	Druzes.	Jews.	Maronites.	Latins.	(Kath.) Catholics.	Greek Catholics.	Moslems.			
قرية الكويكات	13. Kiryet el Kuweikât ..	..	..	..	..	..	..	113	113	565	
قرية ابو سندان	14. „ Abu Senân.. ..	66	..	..	..	..	47	..	113	565	
قرية جت	15. „ Jett.. ..	21	..	..	..	..	..	..	21	105	
قرية يانوح	16. „ Yânûh	49	..	..	..	..	..	..	49	245	
قرية القهوه	17. „ el Kalweh .. ..	..	..	..	..	..	..	74	74	370	
قرية جولس	18. „ Jûlis	72	..	..	..	..	..	..	72	360	
قرية البصة	19. „ el Bassel .. ..	..	..	..	..	..	278	114	392	1,960	
							Sabel	'Akka	1,960	9,800	19,600
قرىا ناحية الشاغور	Villages of the Nâhiet esh Shâghûr (in the Kada of 'Akka)—										
قرية مسجد الكروم	20. Kiryet Mejd el Kerûm ..	..	..	..	..	..	..	215	215	1,075	
قرية عرابي	21. „ 'Arrâbet .. ..	..	..	..	..	37	..	157	194	970	

Name of City or Village.		Number liable to Socage, acc. to Religion.						Total.	Souls.	Grand Total Souls.
Arabic.	English.	Druzes.	Jews.	Maronites.	Latins.	(Kath.) Catholics.	Greek Catholics.	Moslems.		
قرية يتوق	22. Kiryet Yakûk ..	..	..	..	..	..	..	21	21	105
قرية كفرعنان	23. „ Kefr 'Anân (Enân)	..	..	..	..	..	..	16	16	80
قرية بعة	24. „ B'aneh ..	..	..	..	..	..	56	68	124	620
قرية سيجور	25. „ Seijûr ..	38	..	..	..	..	..	..	38	190
قرية الرامبي	26. „ er Rameh ..	85	..	..	..	..	25	115	225	1,125
قرية ديرحنا	27. „ Deir Hauna ..	..	..	..	..	17	..	56	73	365
قرية مغار الخزور	28. „ Mughâr el Hazzûr ..	125	..	..	..	84	..	36	272	1,360
قرية خحف	29. „ Nuhf ..	..	..	..	..	..	..	95	95	475
قرية الفراغة	30. „ el Ferrâdieh ..	..	..	..	..	..	..	91	91	455
قرية دير الأسد	31. „ Deir el Asad ..	..	..	..	..	..	..	145	145	725
قرية مسجنين	32. „ Sukhrîn ..	..	..	..	..	30	25	328	383	1,915
قرية كسرة	33. „ Kesra ..	14	..	..	..	..	..	..	14	70
قرية عيلبون	34. „ 'Ailbûn ..	..	..	..	..	42	..	..	42	210
						Esh	Shâghûr ..	1,948	9,740	29,340

Kada 'Akka — continued.

Name of City or Village.		Number liable to Socage, acc. to Religion.						Total.	Souls.	Grand Total Souls.
Arabic.	English.	Druses.	Jews.	Pro- tes- tants.	Maronites.	Latins.	(Ratik) Catholics.	Greek Catholics.	Moslems.	
قرى ناحية شفاعمر	Villages : Nâhi'et Shefa 'Amr (Kada 'Akka) (Mudiriyyeh)	..	..	..	..	..	..	..	..	..
نفس شفاعمر	35. City of Shefa 'Amr	88	6	35	..	28	220	19	159	550
قرية الطمرة	36. Kiryet et Tumrah	..	..	..	..	..	..	..	107	107
قرية شيخ بريك	37. " Sheikh Abreik	..	..	..	..	..	..	..	79	395
قرية طبعون	38. " Tuba 'ûn ..	..	..	..	..	..	..	..	18	90
قرية مجدل	39. " el Mejdel ..	..	..	..	..	..	..	..	19	95
قرية جيدا	40. " Jeida ..	..	..	..	..	..	..	..	28	140
قرية حارثية	41. " Harithiyeh	..	..	..	..	..	..	..	24	120
قرية جدرو	42. " Jidru ..	..	..	..	..	..	..	..	12	60
قرية ام العمد	43. " Umm el Amad	..	..	..	..	..	..	..	11	55
قرية شعب	44. " Sha'ib ..	..	..	..	..	..	..	17	269	1,430

Kada 'Akka—continued.

Name of City or Village.		Number liable to Socage, acc. to Religion.						Total.	Souls.	Grand Total Souls.
Arabic.	English.	Druzes.	Jews.	Maronites.	Latins.	(Ruthk) Catholics.	Greek Catholics.	Moslems.		
45. قرية بيت لحم	45. Kiryet Beit Lahm ..	..	..	..	..	..	..	11	11	55
46. قرية قدس	46. " Kadmân ..	..	..	..	..	23	..	139	162	810
47. قرية عبلين	47. " 'Abelîn ..	..	..	..	6	14	80	49	149	745
48. قرية رؤيس	48. " Ruweis ..	..	..	..	..	..	..	38	38	190
49. قرية مدعار	49. " Mi'âr ..	..	..	..	..	..	..	96	96	480
50. قرية كابل	50. " Kabâl ..	..	..	..	..	..	..	83	83	415
51. قرية البروة	51. " el Birweh ..	..	..	..	..	..	21	130	151	755
52. غوارنة القراصة	52. " el Birweh ..	..	..	..	..	..	..	33	33	165
53. غوارنة الكواعل	53. Ghawârniet el Karâbsa ..	..	..	..	..	..	..	42	42	210
54. قرية الدامون	54. " el Kuâmil ..	..	..	..	..	..	..	145	145	725
55. Kiryet ed Dâmûn..	55. Kiryet ed Dâmûn..	..	..	..	..	..	..	145	145	725
		Nahiet Shefa Amr						2,044	10,220	39,560
		Total of the Kada 'Akka								

2. KADA HAIFA. قضا حيفا

Arabic.	English.	Name of City or Village.							Number liable to Socage, acc. to Religion.					Total.	Souls.	Grand Total Souls.
		Druses.	Jews.	Maronites.	Latins.	(Katak) Catholics.	Greek Catholics.	Moslems.								
نفس حيفا	1. City of Haifa— (a.) Natives (b.) Foreigners— German subjects American Austrian Holland Spanish French English "	Pro- tes- tants. ..	35	70	42	393	129	605	1,280	6,400	66 10 15 4 15 35 8	330 50 75 20 75 175 40	46,725			
	Villages of the Kada Haifa—							City of Haifa	1,433	7,165						
	2. Kiryet Belled esh Sheikh	..	..	..	..	..	..	90	90	450		
	3. " el Harbaj ..	..	..	..	..	..	..	15	15	75		
	4. " el Yajâr ..	..	..	..	..	..	..	30	30	150		
	قرايا قضا حيفا															
	قرية بلد الشيخ															
	قرية الجوز															
	قرية الياجور															

Kada Haifa—continued.

Arabic.	Name of City or Village.	English.	Number liable to Socage, acc. to Religion.							Total.	Souls.	Grand Total Souls.
			Druzes.	Jews.	Maronites.	Latins.	(Kathik) Catholics.	Greek Catholics.	Moslems.			
قرية كفرتا	5. Kīryet Kefr Efta ..	..	..	..	..	..	..	..	57	57	285	
قرية عسفيا	6. " 'Esfa ..	..	96	..	..	..	15	..	..	111	555	
قرية دالية الكرمل	7. " Dāliet el Kurnul..	..	124	..	..	..	..	..	..	124	620	
قرية قدرة	8. " Kīreh ..	..	..	..	..	..	..	..	13	13	65	
قرية أم الزينات	9. " Umm ez Zeināt ..	..	..	..	..	..	..	..	150	150	750	
قرية الطيرة	10. " et Tīreh ..	..	..	..	..	..	..	..	511	511	2,555	
قرية برج النخيل	11. " Burj el Kheil ..	..	..	..	..	..	..	..	21	21	105	
الكمابير	12. " el Kabābir (Sīyāh)	..	..	..	..	..	..	..	5	5	25	
قرية صرند	13. " Sūrafend ..	..	..	..	..	..	..	..	54	54	270	
قرية المزار	14. " el Mizār ..	..	..	..	..	..	..	..	17	17	85	
قرية صبارين	15. " Sūbbārīn ..	..	..	..	..	..	..	..	232	232	1,160	

Kada Haifa—continued.

Name of City or Village.		Number liable to Socage, acc. to Religion.							Total.	Souls.	Grand Total Souls.
Arabic.	English.	Druzes.	Jews.	Maronites.	Latins.	(Ratik) Catholics.	Greek Catholics.	Moslems.			
قرية ام الدفوق	16. Kiryet Umm ed Dfuf ..	..	..	..	..	..	..	18	18	90	
قرية اجندم	17. " Ijzim ..	..	..	..	..	..	..	342	342	1710	
قرية ام العلق	18. " Umm el 'Alak ..	..	..	..	..	..	..	17	17	85	
قرية سنديانة	19. " Sindiane ..	..	..	..	..	..	..	104	104	520	
قرية جببع	20. " Jeba' ..	..	..	..	..	..	..	88	88	440	
قرية الرحانية	21. " er Rihaneh ..	..	..	..	..	..	..	38	38	190	
قرية كركور	22. " Kerkur ..	..	..	..	..	..	..	21	21	105	
قرية عتليت	23. " 'Athlit ..	..	..	..	..	..	..	36	36	180	
قرية عرعر	24. " 'Ar'arah ..	..	..	..	..	..	..	129	120	600	
قرية المراح	25. " el Marah ..	..	..	..	..	..	..	37	37	185	
قرية عيز غزال	26. " 'Ain Ghuzal ..	..	..	..	..	..	..	182	182	910	

Kâdâ Haifa—continued.

Name of City or Village.		Number liable to Socage, acc. to Religion.							Total.	Souls.	Grand Total Souls.
Arabic.	English.	Druzes.	Jews.	Maronites.	Latins.	(Katholik) Catholics.	Greek Catholics.	Moslems.			
قرية كفر قرع	27. Kiryet Kefr Kâra..	..	..	..	..	..	..	141	141	705	
قرية القندير	28. " el Kannîr	..	..	..	..	..	..	133	133	665	
قرية شفا	29. " Shafeia ..	..	..	..	..	..	..	26	26	130	
قرية عين حوض	30. " 'Ain Hôd..	..	..	..	..	..	..	39	39	195	
قرية كفرين	31. " Kefrein ..	..	..	..	..	..	..	97	97	485	
قرية ام التوت	32. " Umm et Tût	..	..	..	..	..	..	8	8	40	
قرية بريكة	33. " Bureikeh..	..	..	..	..	..	..	23	23	115	
قرية الزغانيه	34. " ez Zerghânyeh ..	..	..	..	..	..	..	10	10	50	
قرية كفر لام	35. " Kefr Lâam ..	..	..	..	..	..	..	36	36	180	
قرية دالية الروحه	36. " Dâliet er Ruhah..	..	..	..	..	..	..	39	39	195	

Kada Haifa—continued.

Name of City or Village.		Number liable to Sorage, acc. to Religion.						Total.	Souls.	Grand Total Souls.
Arabic.	English.	Druzes.	Jews.	Maronites.	Latins.	(Kath.) Catholics.	Greek Catholics.	Mostrms.		
قرية الفريديس	37. Kiryet el Fureidis ..	..	..	..	..	..	..	60	300	
قرية الطنطورة	38. " et Tantûrah ..	..	..	..	..	..	..	154	770	
قرية النخيزة	39. " el Khobbeizeh ..	..	..	..	..	..	..	63	315	
قرية باقة الشرقية	40. " Bâka, esh Sherkiyeh ..	..	..	..	..	..	..	36	180	
قرية جعارة	41. " J'arah ..	..	..	..	..	..	..	27	135	
قرية ام الشوف	42. " Umm esh Shûf ..	..	..	..	..	..	..	75	375	
قرية زعمارين	43. " Zimmarîn ..	..	102	..	..	..	..	..	510	
عرب قيسارية	44. 'Arab Kaisârieh ..	..	..	..	..	..	..	134	670	
جيراكس	45. Jerâkes (Circassians) ..	..	..	..	..	..	..	26	130	
بشناق	46. Bushnâk (Bosniaks) (Caesaraea)	..	..	..	..	..	..	53	265	
عوارنة الزرقة	47. Ghuwârnet ez Zerka ..	..	..	..	..	..	..	47	235	
قرية عميهاس	48. Kiryet Ma-nâs ..	..	..	1	..	..	..	22	115	
		Village of	Kada	Haifa				3,785	18,925	65,650

KADA EN NÂSIRA* (Nazareth) قضا الناصرة

Name of City or Village.		Number liable to Socage, acc. to Religion.						Total.	Souls.	Grand Total Souls.
Arabic.	English.	Druses.	Jews.	Maronites.	Latins.	(Kathik) Catholics.	Greek Catholics.			
1. نفس الناصرة	1. City of Nazareth ..	Pro- tes- tants. 58	..	44	223	169	497	324	1,315	6,575
2. قرية الصفوري	2. Kiryet es Sefûrieh ..	..	..	..	..	..	..	588	588	2,940
3. قرية الرينة	3. " er Reineh ..	..	half Christian,	half Moslem town	..	..	..	230	230	1,150
4. قرية معلول	4. " Ma'lûl ..	..	..	..	..	..	..	130	130	650
5. قرية يافا	5. " Yafa..	..	half Christian,	half Moslem village	..	..	..	180	180	900
6. قرية المجيدل	6. " el Muje'del ..	..	for the greater part Moslems	..	..	..	..	200	200	1,000
7. قرية المشهد	7. " el Meshhed ..	..	..	..	..	..	..	90	90	450
8. قرية الديوري	8. " ed Debârieh ..	..	..	..	..	..	..	60	60	300

* Unfortunately the religions of the villages were not counted up separately, and merely the total number given.

Kada en Nâsira—continued.

Name of City or Village.		Number liable to Socage, acc. to Religion.							Total.	Souls.	Grand Total Souls.
Arabic.	English.	Druzes.	Jews.	Maronites.	Latins.	(Kath.) Catholics.	Greek Catholics.	Moslems.			
قرية العقولة	9. Kiryet el 'Afûleh ..	..	..	..	..	..	..	130	130	630	
قرية القولة	10. " el Fûleh ..	..	..	..	..	..	..	60	60	300	
جباتنة Accord. to Natives.	11. " Jebâta ..	..	..	..	..	..	..	40	40	200	
جبار Accord. to Philology.	12. " Junjâr ..	..	..	..	..	..	..	25	25	125	
تل الشمام	13. " Tell esh Shemmâm ..	..	..	..	..	..	..	30	30	150	
سموني	14. " Semûnieh ..	..	..	..	..	..	..	20	20	100	
عين البيضا (البيضة)	15. " 'Ain el Beida ..	..	..	..	..	..	..	6	6	30	
In the lists. طرعان	16. " Tor'ân ..	..	..	C christians	and Moslems			120	120	600	

Kada en Násira — continued.

Name of City or Village.		Number liable to Socage, acc. to Religion.						Total.	Souls.	Grand Total Souls.
Arabic.	English.	Druzes.	Jews.	Maronites.	Latins.	(Kath.) Catholics.	Greek Catholics.	Moslems.		
قرية كفر كنا	17. Kuryet Kefr Kenna	..	..	Greater	..	part	Christians	166	830	
قرية عين ماهل	18. " 'Ain Máhil	..	..	..	..	..	..	39	195	
قرية كفر منددا	19. " Kefr Menda	..	..	..	..	..	..	50	250	
قرية كوكب	20. " Kawkab ..	..	..	..	..	..	..	22	110	
قرية كسال	21. " Iksál ..	..	..	..	..	..	..	120	609	
قرية خنيفس	22. " Ikhnéifs ..	..	..	..	..	..	..	8	40	
قرية البعينة	23. " B'aíneh ..	..	..	..	..	..	..	27	135	
قرية الرمانة	24. " er Rummáneh	..	..	..	..	..	..	8	40	
قرية العزور	25. " el 'Azeir ..	..	..	..	..	..	..	9	45	
قرية عيلوط	26. " 'Ailut ..	..	..	..	..	..	..	70	350	
					Total	Kada Násira		3,783	18,715	84,365

KADA TABAZIYA (Tiberias) قنسا طبريا

Name of City or Village.		Number liable to Socage, acc. to Religion,							Total.	Sou's.	Grand Total Souls.
Arabic.	English.	Druses.	Jews.	Maronites.	Latins.	(Kathak) Catholics.	Greek Catholics.	Moslems.			
1. قنسا طبريا	1. City of Tiberias ..	..	105	..	6	43	3	271	728	City of Tiberias.	3,640
2. قرية حطين	2. Kiryet Hattin ..	..	20	..	..	..	..	250	270	1,350	
3. قرية المجدل	3. " el Mejdal ..	..	..	..	..	..	..	34	34	170	
4. قرية نمرين	4. " Nimrin ..	..	..	..	..	..	..	60	60	300	
5. قرية اللوبية	5. " el Lubieh ..	..	..	..	..	..	..	546	546	2,730	
6. قرية الشجرة	6. " esh Shejerah ..	..	..	..	..	..	..	136	136	680	
7. قرية ساروتة	7. " Sârona ..	..	..	..	..	..	..	60	60	300	
8. قرية الحدسة	8. " el Hadathel ..	..	..	..	..	..	..	220	220	1,100	
9. قرية كفر كما	9. " Kefr Kama ..	..	..	..	..	..	..	Circasians. 230	230	1,150	

Kada Tabariya—continued.

Name of City or Village.		Number liable to Socage, acc. to Religion.							Total.	Souls.	Grand Total Souls.
Arabic.	English.	Byzants.	Jews.	Maronites.	Latins.	(Kathâlik) Catholics.	Greek Catholics.	Moslems.			
قريّة العدّيسية	10. Kiryet 'Adeisiyeh and vicinity, Bedouins.	..	..	..	..	..	..	55	55	275	
قريّة كفر سميت	11. " Kefr Sabt ..	..	..	..	..	..	..	Alge- rians. 82	82	410	
قريّة عولم	12. " 'Aulam ..	..	..	..	..	..	..	115	115	575	
قريّة شعارة	13. " Sha'arah ..	..	..	..	..	..	..	40	40	200	
قريّة معذر (معذر)	14. " Madher (Ma'zer) ..	..	..	..	..	..	..	195	195	975	
قريّة الدليمية وعزب الهنداد	15. " ed Delhamiyeh wa 'Arab el Hanady.	..	..	..	..	..	..	130	130	650	
(According to Gov. list)		Per- sians	..	..	..	..	..
قريّة السمرا (السمرة)	16. " es Samr (east shore)	4	..	..	..	..	..	32	36	180	

Kada Tabariya—continued.

Name of City or Village.		Number liable to Socage, acc. to Religion.						Total.	Souls.	Grand Total Souls.
Arabic.	English.	Druzes.	Jews.	Maronites.	Latins.	(Kattâk) Catholics.	Greek Catholics.	Moslems.		
قرية ننديب	17. Kiryet Nkeib (near Kûl'at el Husn).	..	..	..	..	..	..	18	18	90
قرية ام جونة	18. " Umm Jûny	..	..	..	..	..	..	66	66	330
قرية معاد	19. " Ma'âd and vicinity	..	..	..	..	..	..	36	36	180
قرية العبدية	20. " el Abediye	..	..	..	..	..	..	62	62	310
عرب صنور الغور	21. 'Arab Sukhûr el Ghôr Bedouins (as far as camping in the Kada Tabariya).	..	..	..	..	..	..	120	120	600
عرب الدالية	22. " ed Dalâikiy do.	..	..	..	..	..	..	59	59	295
عرب الدالية العيسى	23. " Dalâiket el 'Eîsa do.	..	..	..	..	..	..	80	80	400
عرب الصبيح	24. " es Sbeih .. do.	..	..	..	..	..	..	90	90	450
قرية سمين	25. (Kiryet Samakh, 90 Algerian men, or 450 souls, are free of duty, being employed by the Sultan for his personal property.)	..	..	..	Total	Kada Tiberias	..	3,468	17,340	101,705

KADA SAFED. قنصا صند

Name of City or Village.		Number liable to Socage, acc. to Religion.						Total.	Souls.	Grand Total Souls.
Arabic.	English.	Pruses.	Jews.	Maronites.	Latins.	(Kathlik) Catholics.	Greek Catholics.	Moslems.		
قنصا صند	1. City of Safed	..	..	..	..	..	..	1,138	1,138	
حارة الصواوين	Quarters : Hâret es Suwâwîn	..	..	..	..	144	..	991	1,135	
حارة الوطا	" " el Wata	..	about 2650	..	..	..	..	..	2,650	
حارة الغربية	" " el Gharhiyeh and vicinity	..	..	..	..	..	..	City of Safed	4,923	24,615
قرايا : قرية عكبرة	2. Villages : Kiryet 'Akbara ..	..	..	..	..	..	..	47	47	235
قرية الضاهرية	3. Kiryet ed Dâheriyeh ..	..	..	..	..	..	..	67	67	335
قرية قديتا	4. " Kaddîtha ..	..	..	..	..	..	..	63	63	315
قرية طيطبا	5. " Teitaba ..	..	..	..	..	..	..	91	91	455

Kada Safed—continued.

Name of City or Village.		Number liable to Socage, acc. to Religion.							Total.	Souls.	Grand Total Souls.
Arabic	English.	Pruses.	Jews.	Maronites.	Latins.	(Katholik) Catholics.	Greek Catholics.	Moslems.			
قرية دالاتا	6. Kinyet Dalâta ..	..	..	..	..	..	..	71	71	355	
قرية علما	7. " 'Alma ..	..	..	..	..	..	..	221	221	1,105	
قرية فارة	8. " Fârah ..	..	..	..	..	..	..	77	77	385	
قرية بيريا	9. " Bîria ..	..	..	..	..	..	..	71	71	355	
قرية جاعوني	10. " Jâ'âneh ..	75	..	..	..	..	..	111	186	930	
قرية فرعم	11. " Fer'am ..	..	..	..	..	..	..	153	153	765	
قرية المغار	12. " el Mughâr ..	..	..	..	..	..	..	92	92	460	
قرية قباعة	13. " Kabâ'ah ..	..	..	..	..	..	..	77	77	385	
قرية رأس الاحمر	14. " Râs el Ahmar ..	..	..	..	..	..	..	138	138	690	
قرية البجيش	15. " El Jîsh ..	..	..	Christian	..	..	195	192	387	1,935	

Kada Safed—continued.

Arabic.	English.	Name of City or Village.	Number liable to Socage, acc. to Religion.						Total.	Souls.	Grand Total Souls.
			Pruses.	Jews.	Maronites.	Latins.	(Kath.) Catholics.	Greek Catholics.	Moslems.		
قرية ميريون	..	16. Kiryet Meirôn ..	..	..	..	..	..	..	35	35	175
قرية صغصاف	..	17. " Sufsaf ..	..	..	..	..	..	..	148	148	740
قرية سهوحي	..	18. " Samûtaich..	..	..	..	..	..	..	63	63	315
قرية حنين الزيتون	..	19. " 'Ain ez Zeitûn ..	..	..	..	..	..	..	155	155	775
قرية الريحانية	..	20. " er Rihânîyeh ..	..	..	..	..	..	..	89	89	445
قرية كفر برعم	..	21. " Kefr Bir'im ..	..	..	Christians	Christians	257	..	..	257	1,285
قرية ترشيفا	..	22. " Tarshiha ..	..	..	Christians	Christians	171	800	800	971	4,835
قرية ام الفرج	..	23. " Umm el Ferj ..	..	..	..	..	..	..	138	138	690
قرية الكابرة	..	24. " el Kâbry ..	..	..	..	..	..	..	138	138	690
قرية دير القناسي	..	25. " Deir el Kâzy ..	..	..	..	..	..	..	189	189	945

Kada Safed—continued.

Name of City or Village.		Number liable to Socage, acc. to Religion.						Total.	Souls.	Grand Total Souls.
Arabic.	English.	Druses.	Jews.	Maronites.	Latins.	(Kath.) Catholics.	Greek Catholics.	Moslems.		
قرية سحيماتا	26. Kiryet Sahmâta ..	..	..	..	Christians	20	280	300	1,500	
قرية البقيعة	27. " el Bukei'a ..	170	20	..	Christians	100	..	190	950	
قرية كفر سميع	28. " Kefr Sumi'a ..	50	..	..	Christians	6	..	56	280	
قرية بيت جن	29. " Beit Jenn ..	243	..	..	..	..	..	243	1,215	
قرية نبي ابو سبلان	30. " Nebi Abu Sebalân ..	..	..	..	..	..	25	25	125	
قرية حريفش	31. " Hurfeish ..	..	..	..	Christians	23	106	129	645	
قرية سمسع	32. " Sa'sa' ..	..	..	..	..	..	348	348	1,740	
قرية معليا	33. " Ma'lia ..	..	..	..	Christians	155	..	155	775	
قرية فسوطه	34. " Fassûrah ..	..	..	..	..	..	114	114	570	
Total								10,407	52,035	153,740
Grand								Grand	Total	

Total population of the Lîvâ of 'Akka 153,749 souls, with the exception of the Government officials and the military forces.

ARABIC PROVERBS.

Used to characterize some villages in the District of Akka.

By G. SCHUMACHER.

THE following proverbs are commonly known amongst the natives as epithets to the names of villages and cities, to characterize their inhabitants. I have not been able to reproduce these epithets as desirable, following a regular succession, according to the geographical position of the respective villages, but have picked out what I found trustworthy and popular, hoping to complete them occasionally.

Owing to personal experience, I found these proverbs to be in every way indeed characterizing, and if repeated in the respective village either lead to a welcome, or if they sound unfavourable, to a—row. The notes added will explain the proverbs somehow.

1. 'Akka ^{سَلَّمَ وَفَنِي} صكّاوي : "Sellim wakfy 'Akkâwy,"
 "The Akkiote salutes (greet) while standing."

Note.—The inhabitants of the city of Akka are known for their scant hospitality; if a stranger arrives, he is greeted on the street and not invited with the usual "tafaddal" (take advantage) to come home (where the actual reverences ought to be made), to sit down and rest, from fear of staying. The negligence of saying "tafaddal" is equal to the expression, "Go, and look for another lodging!"

2. Haifa ^{فَسَادَ الْمَاءَ حَيْفَاوِي} : "Fessâd el Moy Haifâwy,"
 "The Haifiote is a water spoiler."

Note.—Haifa has no spring, and the wants of the city are obtained from more or less filthy (dug) wells. According to Muhammedan law, the true-believer has to wash himself before praying, with pure, clean water; this law can therefore not be strictly observed at Haifa, and its Moslem inhabitants as well as the place was somehow disregarded for this reason. Recently the wells have been kept cleaner and the project of building an aqueduct will—it is hoped—annul this ill-reputation.

3. Nazareth ^{كَرِيمَ الْيَدِ نَصْرَاوِي} : "Karîm el Yadd Nasrâwy,"
 "The Nazarene is free to give" (generous).

Note.—Hospitality is—in general—practised very freely at this city. Society meals and invitations are a daily occurrence at Nazareth,

while at Akka and at Haifa they are seldom. Nazareth is a conservative place, whose customs, language and manners resemble those of the Fellahîn, while Akka and Haifa have adopted unhospitable habits of the "Franj."

4. *Et Tîreh* (near Haifa) الطيرة :

"Kebîr esh Shâsh Tirâwy," كبير الشاش طيراوي
 "He with a large turban is a Tiriote."

Note.—The Tiriotes, from ancient custom, wear large linen cloths, slung around their ugly heads, in the form of a turban, in order to have the appearance of an "Adamy," a quiet, good man. But in reality they are the greatest thieves, the untrustworthiest crowd around, and are known as such everywhere.

5. *'Athlît* ('Atlît) عتليت :

"Kebîr et Tuhly 'Atlîty" كبير الطحلة عتليتي
 "The one with a large milt is an Atlitian."

Note.—The unhealthiness of the air and the water at Athlît causes a general sickness of the milt among its inhabitants. They are easily known by their bloated gastric regions and their yellowish, pale colour.

6. *Surafend* صرفند :

"Dîk el Mezâbil Sarafandy," ديك المزابل صرفندي
 "The Sarafandiot is a cock on the manure hill."

Note.—This little flattering epithet has its origin from the huge manure hills found in the village and its vicinity. Their summit being the most conspicuous point of the village, the elders and Sheikh meet there at sunset and overlook the adjacent country. Naughty tongues say that, having no Jâma', they use this summit as a "Mêdany!" (minaret).

7. *Kefr Lâm* كفر لام :

"Kefr Lâm ifrish wa nâm," كفر لام افرش و نام
 "At Kefr Lâm prepare thy bed and sleep (rest)."

Note.—The hospitality of this village is so well known that it became a proverb. If any stranger, whoever it may be, arrives at the place, it will cost him quite a trouble to be off again, without spending a night there. The village is small and poor, but meals and attention are as good as anywhere in the district.

8. *Jeba'* كَبَاب العسل جمعاوي "Kabâb el 'Asal Jeba'âwy,"
 "The *Jeba'ite* is a honey cake."

Note.—Honey of a superior quality is found abundantly at *Jeba'*, therefore the guests are generally treated with bread, butter and honey, or honey cakes; the latter being a dainty-bit for an Arab taste, the village has been long famous for it.

9. *Ijzim* اشقر الشارب جزماوي "Ashkar esh Shârib Jizmâwi,"
 "The one with a fair (red) haired moustache is a *Jizmiote*."

Note.—In fact the inhabitants of this large village can be recognized by their red hair, or at least red moustaches. This colour is not esteemed by the natives (excepted when the bearer is a lady), and little trust is placed in red-haired men. The inhabitants of *Ijzim* are renowned bandits, and do every honour to their epithet.

10. *'Ain Ghazâl* عين غزال :

"Râs ej Jûd 'Ain Ghazâl,"
 "The head of generosity is *'Ain Ghazal*."

Note.—This proverb sounds well, and the small village indeed merits every praise, owing to the liberal way in which they generally deal with their neighbours; but they have no spring, and are obliged to bring their water supply from a good distance, therefore they only give you a drink if forced to do so, never willingly, and the proverb was recently changed into the following:—

"Talabna el Akel, ta'mûna, talabna el Moï, ma sakuna."

طلبنا الاكل , طعمونا , طلبنا الماء , ما سقونا

"We asked to eat, they gave us, we asked for water, they gave us no drink."

11. *Tantûra* طنطورة أم العتورة "Tantûra Umm el 'Atûra,"
 "Tantûra is the mother of the heroism" (of the brave).

Note.—This down-trodden village, from external appearances, does not agree with this proverb; but as I have become more closely acquainted with its people, I have found their manner of acting as men, their agreement of mind, whenever a joint step (towards government or neighbours) is wanted, contrary to the childish actions of other fellahin, fully to justify an admiration for them. Unfortunately the climate of *Tantûra* is very bad.

12. *Frîdîs* فريديس "Frîdîs Umm et T'arîs,"
 "Frîdîs, the mother of the immoral."

Note.—It is said that the reputation of its women is not very high, and that of its men still less; but in general they are not worse than other Fellahin in this respect.

The above-mentioned proverbs are said to be centuries old, nevertheless they are still striking, and if held against a Tiriote for instance, asseverating his innocence in this or that before the Kâdy, he will hardly reply anything else in his Fellahin dialect, but : "Ya Ghânim, min ely Kallatsh " (literally) " My shepherd, who told you."

G. SCHUMACHER.

HAIFA, 10th May, 1887.

NOTE BY M. CLERMONT-GANNEAU.

ON page 108 of the April *Quarterly Statement*, Captain Conder disputes the reality of the two Phœnician characters that I found on the monolith of Siloam, and refers the reader to the "Jerusalem" volume of the "Memoirs." I can only find one passage in that volume referring to the characters. In this (page 7) Captain Conder says : "The remains of two letters, apparently of the earlier Hebrew character, have recently been observed on this tomb by M. Clermont-Ganneau, which might serve to class this monument as one earlier than those already mentioned." I formally maintain my opinion. I have had in my hands a squeeze of the letters which confirms me.

On page 105 of the same number, Captain Conder seems to assert that my identification of Hippos with *Susyeh*, where he says that Hippos was identified with Susitha by Neubauer. That identification was made long ago by Lightfoot. My discovery is this, I pointed out that *Susitha* is no other than the Arabic *Susyeh*, and that *Susyeh* mentioned by Mussulman geographers represents the name and site of Hippos.

THE PALESTINE EXPLORATION FUND

NOTES AND NEWS.

In the present number of the *Quarterly Statement* Herr Schumacher describes certain very curious discoveries made at Zummârîn, a place standing on a spur of Carmel, south of Haifa; among these were unrifled tombs in which were found lachrymatories, glass bracelets, mortars in basaltic stone, &c. At Tiberias some of the ancient baths have been discovered.

The account of the Saida discoveries (page 201) is translated from a paper called the "Bakeer," published in Beyrout, in Arabic and French. It is as yet the only account of the sarcophagi which has appeared of any importance. The Phœnician inscription has been translated by some one—it is not stated by whom—and the sarcophagi are all deposited in the Imperial Museum of Constantinople. We shall publish drawings of these monuments as soon as they are received.

The first instalment of the replies to our Questions is that which has been prepared by Captain Conder from answers received from his own correspondents. It seems that the Questions are beginning to yield results.

Herr Schick's "Notes in Jerusalem" give several valuable new facts about the second wall, the rock levels, &c. Among other points, he shows that Dr. Merrill was misled when he stated that a rock scarp existed there. There is no rock scarp, but the rock slopes gently away to the west, showing that the wall stands on the highest part. Herr Schick has not yet verified his theory of the further course of the wall.

The following particulars of the Memoirs by Herr Schumacher in his recent surveys in Jaulan and Ajlûn anticipate the publication of the work, which will be given to subscribers with the *Quarterly Statement* of 1888. It was intended to commence the Memoirs with this number, but it was thought best to begin a new volume with them.

The district of Jaulan, the Golan of Manasseh, which has been surveyed, is 39 miles in length at its longest points and 18 in breadth. It comprises an area of 560 square miles. On the best map of Palestine there are found about 150 names. On Schumacher's there are 600, being the names of ruined towns, springs, ancient highways, remnants of oak forests, perennial streams, great fields of dolmens, with some remarkable volcanic features. The volcanic mountain, Tell Abu en Nida, rises to the height of 4,123 feet, and that called Tell Abu Yusef to the height of 3,375 feet. Herr Schumacher has drawn upwards of 152 plans and sketches of the country. He has collected a great variety of information on the manners and customs of the people. He has made special plans of the hot springs, &c., of Amathia, the Zaphon of Joshua xiii, 27, and of Kulat el Husn-Gamala, Susitha and Fik.

The district of Northern Ajlûn, also surveyed, contains 220 square miles, a population of 10,460, and shows on the map 334 names of places. There are in the Memoir detailed plans of 100 places—churches, theatres, vaults, mausoleums, temples, walls, columns, capitols, street pavements, sarcophagi, caves, cisterns, birkets, aqueducts, and ornamental work; there are collections of mason's marks, Greek inscriptions, drawings of dolmens and stone walls; and there are detailed plans of Umm Keis (Gadara) and Beit Ras (Capitolias).

The district contains about a thousand dolmens scattered over extensive fields; the fertility of the soil is inferior to that of the Hanan; the water supply is chiefly derived from cisterns; there are everywhere patches of forest, now chiefly oak, though the remains of oil presses show that there were previously olives. Herr Schumacher gives also an account of the inhabitants, who are chiefly Moslems.

At the moment of going to press Herr Schumacher's account of his journey to Pella has been received.

The "Memoirs of Twenty-One Years' Work" is now in its third thousand. *Subscribers are earnestly requested to use this book as a means of showing what the work has been, and what remains to be done.* Copies are given to every subscriber who wishes to have one, and additional copies can be procured at a great reduction in the price, *by subscribers only*, by writing to the central office.

The Palestine Pilgrims' Text Society will issue before the end of the year the following works—

1. Arculfus de Locis Sanctis (in the autumn).
2. La Citez de Jerusalem (in the autumn).
3. The Travels of the Russian Abbot Daniel (ready in July).

The works already issued are—

1. Antoninus Martyr.
2. Sancta Paula.
3. Procopius.
4. El Mukaddasi.
5. The Bordeaux Pilgrim.

The subscription is one guinea. New members can have copies of works published in previous years at a reduced rate. Members are requested to forward their subscriptions to the Hon. Secretary without being reminded.

Will all the subscribers to the Palestine Fund remember—(1) that it helps the Committee very much if subscriptions are paid early in the year? (2) Next, that it saves a great deal of trouble if they are paid to Coutts & Co. direct by a Banker's order? and (3) That whenever they are due it saves a great deal of labour if they are paid without waiting for a reminder? The clerical staff of the Society is small, and it is greatly desired not to increase the management expenses, and not to overburden the work of the office.

The following books are now published uniform in size and appearance:—Conder's "Tent Work;" Conder's "Heth and Moab;" Schumacher's "Across the Jordan;" "The Memoirs of Twenty-One Years' Work;" Conder's "Syrian Stone Lore." Subscribers can have the whole set, together with Hull's "Mount Seir," for 25*s.* carriage free.

Mr. Armstrong has prepared a list of the photographs belonging to the Society arranged alphabetically according to those Bible names which are illustrated by views. This list is now ready. Those who wish for a copy may send in their names.

We are sorry to say that the long-promised List of Old Testament Names, with their identifications, is still delayed. It will, however, be positively ready in a month.

The great Index to the "Survey of Western Palestine" is in the press. It is hoped to have this ready by the end of the year.

A subscriber, who has all the *Quarterly Statements* complete from the beginning, except July, 1871, would be very much obliged if any one having that number would dispose of it to him.—Address: Rev. J. Mitchell, 57, Parkgate Road, Chester.

The income of the Society, from June 17th to September 13th, 1887, inclusive, was—from subscriptions and donations, £105 4*s.* 7*d.*; from all sources, £183 0*s.* 7*d.* The expenditure during the same period was £230 0*s.* 0*d.*, viz.: on Exploration, £151 0*s.* 0*d.*; on Office, £79 0*s.* 0*d.* On September 14th the balance in the Banks was £219 1*s.* 6*d.*

Subscribers who do not receive the *Quarterly Statement* regularly, are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

The only authorised lecturers for the Society are—

- (1) The Rev. Henry Geary, Vicar of St. Thomas's, Portman Square. His lectures are on the following subjects:—

The Survey of Western Palestine, as illustrating Bible History.

Palestine East of the Jordan.

The Jerusalem Excavations.

A Restoration of Ancient Jerusalem. Illustrated by original photographs shown as “dissolving views.”

- (2) The Rev. James King, Vicar of St. Mary's, Berwick. His subjects are as follows:—

The Survey of Western Palestine.

Jerusalem.

The Hittites.

The Moabite Stone and other monuments.

- (3) The Rev. James Neil, formerly Incumbent of Christ Church, Jerusalem.

- (4) Mr. George St. Clair, F.G.S., has returned from his Eastern tour, and is prepared to give Lectures for the Society in all parts of Great Britain. His subjects for the autumn will be—

(1) *The Buried City of Jerusalem*, and General Exploration of the Holy Land. Numerous diagrams.

(2) *Buried Cities of the East*. Numerous diagrams.

(3) *Sight-seeing in Palestine*. Lantern views, where local help can be obtained.

Address: G. St. Clair, Bristol Road, Birmingham; or at the Office of the Fund.

THE RECENT EXCAVATIONS AT SAIDA.

(From the *Bachir*, a journal in French and Arabic, published at Beyrout.)

I.

ONE of our missionaries at Saida has followed the excavations day by day, and has sent us very full and interesting accounts of them. We, ourselves, having visited the place and admired the tombs which have been brought up, are in a position to give our readers accurate information about these important discoveries.

Towards the end of the month of February of this year, a rich Mussulman proprietor of Saida, M. Mohamed Sherif, had his grounds in the vicinity of the city excavated, with the object of recovering from the *débris* the ancient buildings, out of which the inhabitants of the country for the most part construct their houses.

The workmen lighted upon a rectangular pit, about 4 metres by 5, hollowed in the rock which forms the substratum of the field. Mohamed Sherif had this cleared out. At a depth of 11 metres four apertures were discovered, one at each side of the pit. These openings, 1 metre high by 50 centimetres wide, and closed by a slab, afforded access to the same number of funeral vaults full of large and splendid marble sarcophagi.

According to an Ottoman law, if the proprietor of land where antiquities are about to be brought to light makes a declaration to the Government within eight days, half of the newly-discovered treasures or their value is handed to him; if he omits to make this declaration he has not only no right to anything but he is also liable to a fine.

Mohamed Sherif declined the seductive offers of various virtuosi and others on the look out for antiquities, and in conformity to the law of the country, immediately gave notice of the discovery to the Kaimakam of Saida. Bechara Effendi, engineer of the vilayet of Syria, was sent by his Highness the Waly to reconnoitre the places and monuments. He discovered new sepulchral chambers, new tombs, and on March 27th he sent to the Government a detailed report, with a plan of the places and a brief description of the archæological treasures. He concluded with the despatch of a special commissioner, charged with transporting the sarcophagi to the museum at Constantinople.

His Excellency Hamdi Bey, Founder and Keeper of the museum at Constantinople, and an old pupil of the School of Fine Art in Paris, as well as a distinguished painter, was also sent by his Majesty the Sultan, accompanied by his Excellency Demosthenes Baltazzi-Bey, a learned archæologist of Smyrna, and inspector of ancient monuments. The excavations were recommenced under their direction on the 1st of May. By the end of the month all the tombs of any value were drawn out from their vaults, cleverly packed, and ready to convey by sea.

The field where the tombs were discovered is 800 metres from the sea-shore, and 1,500 metres north-east of the northern gate of Saida, between the villages El-Halalieh and El-Baramieh. It borders on the garden of Doctor Shibli Abela, and bounds the gardens of the city on this side.

The walls of the pit are set exactly to the cardinal points.

Underneath a layer of earth, mixed with *débris* a metre in thickness, there is a conglomerate of silicon and limestone similar to that of the dunes of Beyrout, and 3 metres in thickness; and still lower there is a kind of masonry, in which are set the doors of the sepulchral chambers. These chambers are themselves hollowed out of white limestone, which is fairly thick and soft.

It is impossible to describe the splendour and perfection of the sepulchres which they contain: an art so perfect does not permit itself to be described, it can only be admired.

The variety of form, style, and workmanship is not less marvellous, and baffles all conjecture that can be made as to the origin of these sepulchres.

The vault which is situated east contains two large sarcophagi in white marble placed at the same level, and separated from one another by an interval of 0·50 metre. Their dimensions are the same, 2·60 metres by 1·25 metre wide and 1·20 metre high, without reckoning the lid, which is 0·50 metre in height. The one which the visitor leaves on his left on entrance has no sculpture nor chasing of any description whatever, whilst on the other the second one is covered with sculpture, and first attracts the attention.

All round there is a portico of fluted Ionian columns with Doric pilasters in the angles. On each of the eighteen bays there is a female mourner in high relief in Greek robes. Each of these has a different pose.

The lid forms a roof with two sides, and is filled in with overlapping stone slabs almost identical with the tile slabs of Marseilles used at Beyrout. An Attic "*Kymation*," 0·50 metre, stretches the whole length; it is raised as high as the top of the roof, and adorned with sculpture representing a funeral procession.

A man in Greek dress marches at the head of the procession, then two horses led by hand; after which there follow a triumphal car, a man holding little bandelets in his hand, and a car with two horses bearing the sepulchre of the dead. Behind this car there is an attendant, and finally a horse walking alone. On the gorge of the pedestal there is a very delicate bas-relief representing the chase.

The composition of the work, however, betrays some negligence, and points to a Greek production of the second century, before the Christian era. Inside were found the bones of women and also seven heads of dogs.

The southern vault has likewise two sarcophagi. Although the opening is on the same level as that of the other crypts, the ground on which the tombs rest is about 2 metres lower down.

One tomb in black marble, improperly called Egyptian basalt, is not remarkable for any sculpture. Like the most unadorned of the two tombs in the eastern cavern it will be left in its obscure retreat. At the side of this latter the visitor perceives another in white marble placed at his left, which by its singular form and rich chasings calls forth his admiration. The lid is an ogival vault 1·50 metres in height, the tomb itself is 2·40 metres long by 1·30 metres wide, and its height equals that of the lid.

It is a Lycian tomb. Up to the present time there are only seven tombs of this form known, and they are all found in the province of Lycia ; six are now at Constantinople and one at Vienna.

The extrados of the vault forming the cover is smooth and without any ornamentation. At the vertical extremities there is sculpture consisting in part of two magnificent Greek sphinxes with wings, female busts, and extremely beautiful and graceful human heads ; and in the other part of two griffins with heads of birds and the bodies of mammals, one male and the other female.

Two quadrigæ, each led by two amazons, are found on the sarcophagus. The horses are of the Archaic and conventional form of the horses of the Parthenon, sculptured by Phidias. The mane is straight like the dorsal fin of a fish ; in the mouth is a bit enclosed by two square plates holding the animal's lips. But the finest thing is the expression of the horses' heads ; they are living, speaking, and of most exquisite finish. The muscles, the veins, the movements of the nostrils, and the folds of the skin are represented with matchless perfection. "I would give one of the other sarcophagi in its entirety for a single one of these horses' heads," said his Excellency Hamdi Bey.

The opposite front represents a wild boar hunt. A Greek horseman appears to command, raising two fingers, the index and middle. "One would almost say that he is blessing like our Bishop," said the Greek ladies of Saida.

Upon one of the ends there are two centaurs erect on their hind legs, holding a hind between their front feet over which they are disputing ; their figures are full of expression and very fine.

On the other end two centaurs are upsetting jugs of water one after another. Who can guess the meaning of this picture ? The great height of this sarcophagus has doubtless been the cause of the lowering of the floor of the sepulchral chamber.

The western vault, which is less deep, only contains one white marble sarcophagus in the shape of a mummy chest. We will speak of it later on. This crypt serves as a vestibule to a sepulchral chamber much larger and much better kept than the others which open on to the south side.

In this chamber you may see little gutters against the walls for collecting the oozing water ; the holes in the top of the walls, which correspond two by two, and were to hold the beams with which the lids of the sarcophagi were kept in place, and a red horizontal arrow traced

on the wall which has served as a bench-mark to the workmen laying down stones.

It contains four tombs. The largest and at the same time the most valuable and beautiful of all the sarcophagi found here occupies the south-west angle. It is 3·30 metres long by 1·70 metre wide, and 1·40 metre high excluding the lid, which is 0·80 metre high. It is a masterpiece of sculpture, architecture, and colour, the discovery of which will mark an epoch in the history of art.

All the museums of Europe will want to have a cast of it. This tomb is a piece of Greek art, the figures of which lie between the conventional Archaism of the former ages and the realism of the last centuries of ancient art. Its naturalness, nobleness, and grace make it worthy to rank with the finest masterpieces known. Everything is painted in natural colours; the different tints of purple predominate, and go from poppy-coloured red to blue, passing away to the deepest violet.

It is known that Sidon possessed large manufactories for making purple. One may see still in the talus of the hill upon which rise the old citadel called after St. Louis, great piles of *murex* shells, all opened on the same side, for the purpose of extracting the mollusc which yields the Tyrian purple.

The other colours appear to be the ochres so common in the mountains of Lebanon. The tints are admirably harmonised, notwithstanding their brightness. No detail is forgotten, even to the eyes of the men, the horses, and the lions, which are painted in natural colours, without any incision in the marble tracing the iris or the pupil.

All the sculpture is in high relief; the detached limbs are not even supported. The four sides of the sarcophagus are occupied by two subjects. One large and one small side are taken up by a battle scene; the two other sides by hunting subjects, where figure the same personages become friends.

The Greeks, easily recognised by their physiognomy, are nude; they simply bear a helmet and the large round buckler, with a border peculiar to them. The Persians are fully clothed; they are recognisable by the peculiar head-dress called *mītra*, which envelops the whole head from the forehead to the nape, and covers the cheeks and chin, and is the head-dress worn by the companions of Darius in the large mosaic work of Pompeii. They may be further distinguished by their long trousers (*bracée laxæ*), peculiar to the peoples of Asia and the north. The Greeks never wore trousers; the Romans only adopted them at a late period under the Emperors. The arms of the combatants, which were all of gold, have been delicately removed by the violators of the tomb.

In the centre of the battle there is a ghastly mass of horsemen, foot soldiers, and dead and dying; one perceives a hand, which has been cut off, thrown on one side and crushed under foot. The persons are excited by a fury which contrasts with the calm intrepidity and martial serenity of the Greeks. One understands on which side will be the victory;

almost everywhere the Greek plunges his sword into the breast of the barbarian before the latter has struck him with the club, the hatchet, and the lance which he brandishes in the air. Great beauty of figure and pose is seen here.

The animation of the combatants, the grief and terror of the dying, as well as the fright of the horses, is simply admirable.

According to the Greek custom, the two principal persons are to be seen at the extremities of the picture. These are horsemen clothed in purple. One of them, conspicuous by his attitude, martial air, and the richness of his costume, might probably be the prince buried in the sarcophagus. The other has a Greek head of the most beautiful type, and wears thereon the skin of a lion ; he is perhaps Alexander the Great, whom several medals represent with this Herculean head-gear.

In the second picture a lion has thrown himself on a horseman, and is already lacerating with his claw the breast of the horse, from which hangs bleeding flesh. The horseman has wounded it with spear, and struggles to free his charger ; but the animal holds to its prey, notwithstanding that an enormous dog has sprang on to him and bites him furiously.

Two huntsmen are hastening up with their swords, and in the distance an archer lets fly his arrow.

Men and animals are magnificent in their bound, courage, and strength. Not far off a poor stag, hemmed in by two huntsmen, from whom it cannot escape, excites compassion, and forms a fine contrast.

The lid is not less beautiful. It is in the shape of a roof with two sides, covered over with tiles in the form of fish scales. All around, on the edge and on the line, are placed the heads of spirits ; they are exquisitely graceful, and surrounded by a halo of rays. Those of the top have two sides, and are a little larger than those on the edge ; rams' heads projecting over the front of the cornice like gargoyles, alternate with the heads of the spirits. At the four corners are four sleeping lions, which seemed to us unequalled masterpieces ; one might almost say that they are mourning for the dead man, and trying to see him by leaning the head outside the roof.

The three other white marble sarcophagi found in the same chamber are exactly similar to one another. They measure about 2·50 metres long by a total height of 2 metres. They look like a Greek temple with most harmonious proportions.

The walls are smooth, and an elegant vine foliage, with yellow leaves on a purple background, runs beneath a very delicately sculptured cornice. The sculptured ornamentation on the pedestal and in the pediments is equally beautiful.

These tombs, in their simplicity, are veritable masterpieces of good taste, harmony, and elegance.

At first sight the northern chamber only presents two sarcophagi, one of which belongs to the class of Egyptian coffins which roughly resemble the human form, after the manner of the mummy chests, and which have

been called anthropoid sarcophagi. Like that of the west vestibule, it is in white marble. The head is roughly drawn on the lid ; the arms disappear in the bust.

But, from the haunches down, everything is more clearly defined ; the projections of the knees, calves, and ankle bones are distinctly delineated. In this they differ from the anthropoid sarcophagi found at Sidon, and now in the possession of the Louvre Museum. These, on the contrary, have very well drawn heads, whilst the lower portion is a simple case raised towards the feet. At the bottom of one of them was a plank of sycamore, the wood used for the chests of the Egyptian mummies. Small holes set in the edges doubtless served to keep the body in place. Judging from the remains of the fillets and bones, it was very imperfectly embalmed.

On removing the *débris* which covers the floor, were discovered two chambers situated on a lower level, east and west of the former. The one in the east has only a small tomb of no interest ; in the other four white marble sarcophagi were found. Only the most remote one has sculpturing. One of its ends shows a prince with an Assyrian tiara on his head, stretched on his funeral bed. They are offering him food and serving him with drink in a large horn ; two attendants stand behind his pillow, apparently keeping guard ; his wife sits at his feet, weeping for her spouse. It is a representation of oblation to the dead.

All the tombs of which we have up to now spoken have been violated at an already very remote epoch by greedy hands, who have removed all the precious objects. Consequently nothing was found in the shape of jewels, except fifty-four gold buttons, whose diameter was that of a half franc, and which are convex, like a bell, without any carving. They remained hidden in the mud deposited at the bottom of the Assyrian personage's tomb. The violators penetrated into each sarcophagus by breaking one of the corners of the lid, but have not injured the other parts.

His Excellency Hamdi Bey had, however, the good fortune to open a sarcophagus which had not been violated. He discovered it in a lower chamber just beneath the tomb of the eighteen mourners. It is a black stone sarcophagus of a singular semi-human form, and at least a metre in width.

It contains the long hair, teeth, and bones of a woman ; with fragments of little bands, a royal fillet of gold, which is flexible, and the width of three fingers ; a large gold band, quite plain, like a curtain ring ; and at the bottom, a plank of sycamore wood similar to that of which we have spoken.

The excavations have yielded earthenware lamps of rough workmanship, in the form of a rounded plate, the edges pressed and turned up to form the socket for the wick ; and also several alabaster vases intended to hold perfume. They are all of Egyptian alabaster, pear-shaped in form, 25 centimetres high, and have no carving except circular arrows left

projecting by the carver ; the orifice is narrow (3 cm.), and the vase is fragile, being scarcely a centimetre in thickness.

Alabastrums similar to these have been brought from Cyprus by M. de Cesnola. It was, perhaps, a vase of the same shape that Mary used to embalm beforehand the body of the Saviour, at one of the last suppers at Bethany, and which she broke at his feet. It contained, says St. John, a pound of spikenard oil, which Judas estimated at the value of about three hundred francs. The alabaster vases of Sidon would contain more.

All the sculptured tombs are evidently of Greek art. The blocks of marble must have been brought from the islands of the Archipelago ; there does not exist any marble on the Asiatic coast from Egypt to the borders of Smyrna. They must have been sculptured at Sidon, for it would have been impossible to bring from Greece objects which were at the same time so heavy and so delicate ; the body of the largest sarcophagus weighs 13,000 kilos. and the lid nearly 5,000 kilos. It is presumed that in order to lower them in the pits, the process of the Egyptians was used, viz., the pit is filled with sand, the sarcophagus is placed on this artificial soil, and lowered slowly while the sand is being taken out.

We are in the presence of tombs which differ in state as well as in style. The complete absence of inscriptions reduces us to conjecture as to their origin and date. They do not appear to us to go back further than the last centuries which preceded the Christian era. A single piece of money has been recovered from the rubbish of the pits ; it dates from the time of Alexander Bala, King of Syria, about 149 to 144 years before Christ.

The labour employed under the direction of his Excellency Hamdi Bey, by M. Bechara Effendi, for the raising of these enormous sarcophagi is not without interest. If the merit of such a work lies in the superiority of the result above the resources which were at one's disposal, certainly the engineer, M. Bechara, merits great praise.

He dug in the soil a trench which descended to the level of the sepulchral chambers, at the uniform incline of 15 per cent., terminating in a tunnel bordering on the pits. Two lines of small pine beams, united by cross beams, were fixed in the soil and greased on the surface ; on this wooden road, by the help of rollers, he caused the sarcophagi to be slid along. This caused no damage to the sculptures, or accident to man. A frigate is expected shortly, from Constantinople, to take away these treasures. Already there is being built on the sea shore a quay jutting out 30 metres into the sea, to take the blocks to the ship.

At the northern extremity of the room, his Excellency Hamdi Bey noticed a gap which appeared to lead to the other excavations. Guided by this indication, he discovered, 6 metres to the north of this hole, a second similar hole, 4 metres long, 3 wide.

When he had dug away to a depth of 7 metres, there appeared an aperture in the north wall. The room to which it gave access was

5 metres long, 3 metres 50 cm. wide ; the stone was covered with thick plastering and stucco, partly fallen to the ground. In an angle at the further end were found two large bronze candelabras ; they are simple and beautiful ; the base is a tripod, the column of the thickness of an arm, terminates in two flowers turned upside down, placed one above the other, and bears an elongated basket to which is fixed the torch. Both are after the same model without being alike ; the one is 1 metre 50 cm. in height, the other a few centimetres less. A Phœnician candelabra, quite similar to these, except that it had only one flower upside down, was found at Curium, in the island of Cyprus, and is to be seen in the Museum of New York.

The soil of the room was formed by a bed of enormous stones, 65 centimetres thick, very well arranged. Beneath these was found a second similar bed still thicker, then a third ; at last an enormous monolith, measuring 10 cubic metres, which covered the hole cut into the living rock, where was hidden a magnificent anthropoid sarcophagus of black stone. It recalls in a striking manner the sarcophagus of King Eshmunazar, of Sidon, found similarly in the gardens of Saidla, more to the south, now in the Louvre. It is 2 metres 50 cm. in length, and its average width is 80 cm. The head is magnificently carved ; the head-dress and beard are in the Egyptian fashion ; the breast and the vertical sides of the coffin are covered with hieroglyphics ; and on the raised portion which, in the form of a stool, covers over the feet, there is a Phœnician inscription in eight lines. The whole thing is perfectly intact.

This apparently is the most important tomb, round which so many magnificent tombs are grouped.

On opening the lid the mummy appeared well preserved, but there immediately followed a partial decomposition, accompanied by the escape of a fetid odour, which damaged the centre of the body. The hands and the extremities of the feet no longer existed ; the rest of the body was lost in the sand, with which apparently the sarcophagus was originally filled, and which consequently caused the dessiccation of the corpse. The hands and feet remaining outside were corroded by the damp air. The body rested on a concave plank of sycamore, fitted on each side with six silver rings through which passed the ropes holding the mummy in place.

In the coffin a golden diadem without ornamentation was found.

The squeezes and photographs of the inscriptions were sent to the Academy of Inscriptions and Belles-Lettres at Paris. We must wait for *savants* to give us the complete translation. Its characters are of exactly the same form as those of the funeral inscription of Eshmunazar in the Louvre ; they appear to be modelled on the same type.

On a level with this royal sarcophagus there is an opening on the south side of the wall which gives access to a sepulchral chamber divided into two compartments. The western one contains an undeseccated tomb in which a quantity of feminine jewellery is to be found : there is a gold necklace, two gold bracelets of beautiful workmanship, and another

bracelet ornamented with coloured stones, and having in the centre a kind of opal called cats-eye. We find further some rings or bracelets for the feet, sixteen rings, a bronze mirror, and several symbolic eyes, viz., an Egyptian trinket presenting the shape and design of an elongated eye with a tear dropping from the nasal angle ; some of them were in gold, the others in cornelian stone. The compartment in the east, and a second chamber which follows in the same direction, only contain tombs which have been broken into and are without interest.

The rectangular walls, the sepulchral chambers dug in the sides, the precautions taken to render them undiscoverable or inaccessible, in order that the repose of the dead should never be disturbed—all this is thoroughly Egyptian. There is nothing which more resembles the sepulchre discovered at the last place than the great square well situated at the foot of the great Egyptian pyramid ; at the base is still to be seen the black stone sarcophagus.

The most celebrated and longest of all the Phœnician epitaphs, that of King Eshmunazar, which includes twenty-two lines, is full of injunctions on this subject : “Do not open this coffin to seek treasures there,” cries the King, “there are no treasures.” Then, suspecting that one would want to know if he spoke the truth, he invokes the help of the gods, whom he charges with the punishment of the violaters.

Undoubtedly the king, whose sepulchre has just been discovered, had this feeling in thought, but, more intelligent than Eshmunazar, he deemed that a deep vault with large stone blocks, 3 metres and more in thickness, laid over it, was a preferable guarantee to an inscription and the curse of Astarte. The resemblance of the two sarcophagi leads us to believe that the one just brought to light may be traced to about four centuries before Jesus Christ.

The existence of a third pit near the tunnel has been established, but the advanced season did not permit of the continuance of the excavations ; they will be resumed in February next. Everything induces the belief that this Necropolis holds further pleasing surprises for the artist and the *savant*.

II.

Oriental *savants* already understand the meaning of the Phœnician inscription on the royal sepulchre which is found in the second shaft. It is as follows :—

“I, Tabnite, priest of Astarte and King of Sidon, son of Eshmunazar, priest of Astarte and King of Sidon, lying within this sepulchre, thus speak : Come not to open my tomb ; here is neither gold nor silver nor treasures. He who opens my sepulchre shall have no prosperity beneath the sun, and he shall not find repose in his tomb.”

The mummy, then, found in the sarcophagus is that of Tabnite, King of Sidon.

The Phœnician inscription on the tomb in the Louvre furnishes some further information about this personage. There we find :—

“I, Eshmunazar, King of Sidon, son of Tabnite, King of Sidon, grandson of Eshmunazar, King of Sidon, my mother, Ammashtoret, Queen, and daughter of Eshmunazar, King of Sidon, have built temples to the gods,” &c.

Thus we learn that Tibnite is the father of the King Eshmunazar, whose tomb is at Paris, and the son of another King of Sidon, also named Eshmunazar. He espoused his sister Ammashtoret, and undoubtedly this union was not happy, for we read in the same funeral inscription of their son : “I have been snatched away before my time. I am the son of few days, an orphan son of a widow.” It has been questioned whether Tabnite is not the king whose history Dodorus of Sicily relates under the name of Tennis. By treason he delivered his capital to Artaxerxes Ochus, King of the Persians, and was put to death by the invader as soon as the latter had no longer anything to expect from the traitor. The Sidonians, seeing themselves betrayed, locked themselves up in their houses with their wives and children, and set fire to them. Forty thousand of them perished, whilst the city was nothing but a devastated field, which the enemy sold piecemeal for a money value. This was in the year 351 B.C. (Dodorus of Sicily, lxvi, 45).

To-day the discovery of the mummy of Tabnite compels us to distinguish between the two personages. The head and limbs are not separated from the trunk, and no traces of wounds or anything indicating a violent death are to be seen. Besides, it is incomprehensible how a burial necessitating so much labour and trouble could have been effected at the death of Tennis during the burning and destruction of the city.

According to the most tenable opinion held at the present time, the last Eshmunazar lived about the year 395 B.C., and consequently Tabnite about the year 400.

It must have entered many persons' minds on reading these lines that the demi-anthropoid tomb found unbroken in the first shaft, containing the remains of a woman with a golden diadem, might probably be the sarcophagus of Ammashtoret, the wife of Tabnite, who died after him. The southern shaft might have been hollowed for the interment of this queen, as that of the north was for her husband.

The upper sepulchral chambers, with their magnificent sarcophagi in white marble, are undoubtedly less ancient than the royal vaults. In particular, the tomb, with eighteen mourners, could only have been placed above that of Ammashtoret several years later, when persons no longer troubled about the fear manifested by the defunct sovereigns of being disturbed in the semi-slumber of their tombs by the dwellers of an upper storey. In his large inscription the young Eshmunazar twice

over enjoins them not to construct any sepulchral chamber above his own.

Let us, moreover, add, that in the tomb of the Assyrian personage, besides the gems of which we have spoken, a gold rectangular plaque has been found, pierced at the four corners like an ornament intended to be fastened on a garment, and covered with carvings representing over and over again the form of a comb, frequently found on the Phœnician jewels in our museums.

The "Times," they tell us, advised the Turkish government to leave these magnificent sarcophagi where they were. "These treasures," said its correspondent, "are in a fair way to be ruined," believing doubtless that there were neither men nor machines capable of effecting the transport without damaging them. We are happy to be able to prove by the fact that he was mistaken.

A transport ship, the *Assir*, belonging to the Imperial Turkish Navy, had arrived at Beyrout with the presents which His Majesty the Sultan sends every year to Mecca by the caravan from Damascus. It received orders to repair to Saida, and on June 13 was moored north of the town, between the islet of Gesireh and the shore, as near as possible to the coast. Owing to the disturbed sea, it was not possible to proceed with the shipping during the two first days. There was, in addition, a moment of uneasiness—the ship touched the bottom, and had to be pushed off again. On the 16th the sea was calm, and the embarkation commenced. The enormous packages, drawn over the same wooden road which had been used to take them out of the shafts, arrived at the wharf, which was built on piling, and from thence passed over upon a solid raft level with the platform.

The raft, the conception of the engineer, Bechara Effendi, who superintended the work, consisted of five rows of large beams superposed, and forty empty tuns fixed between the beams.

The platform measured 11 metres by 6; the draft was calculated in such a way as to render it easy to lower the side of the raft on to the rafters on the arrival of the large blocks. Ropes, attached to pulleys and to the ship, were used to haul the raft and its burden until it lay beneath the machines of the *Assir*.

An enormous crane, constructed of ropes, cords, blocks, and pulleys such as nobody but an old sailor could either imagine or correctly name), and set in motion by two steam engines, was used to put the huge packages aboard, and, under the direction of Captain Hassan Bey, accomplished its task with admirable precision.

The great sarcophagus, of more than 13,000 kilos., was one of the last to be taken. When it was suspended above the deck, his Excellency Hamdi Bey had the scene photographed, and a cannon fired from the vessel announced to the inhabitants of Saida the success of the embarkation. All was accomplished without the slightest accident.

We have been credibly informed that the expenses of packing, excavating, constructing the machines for embarking, transit, and indemnity

to the owners of the gardens traversed *en route* have not exceeded 10,000 francs (£400).

The *Assir*, carrying these monuments to Constantinople, stopped two days at Beyrout. Their Excellencies took advantage of this to put on board certain valuable antiquities which had been confiscated by the law and placed in the court-yard of the Seraglio, viz., a fine head of the Emperor Adrian ; a cuneiform inscription of twenty lines, in a very good state of preservation, covering a slab 0·45 metre square ; a hand-mill, on the upper stone of which are some extremely curious characters, recalling the Hittite inscriptions ; and a cone of white marble 0·50 metre, the Phœnician symbol of the great goddess Astarte.

Before returning to the capital the ship stopped facing Mylassa (in Caria), to take up two marble statues of the best Greek era. The museum of the Louvre had bought them for several thousand francs ; but the difficulties of carrying them down to the sea had caused the transaction to be broken off, but now an easy route afforded an opportunity of taking them away without difficulty. His Excellency, Baltazzi Bey, is of opinion that it is the quarries of Mylassa which have furnished the white marble of the great sarcophagi of Sidon.

It is only a short time ago since a Turkish war vessel loaded at Jassus (the old port, hard by Mylassa) the blocks of stone taken from an old wall and carried them off to Constantinople for some building or other. His Excellency Hamdi Bey heard that these blocks bore inscriptions, and caused the shipment to be seized. They found on them 140 inscriptions containing decrees (*ψήφισμα*) in the Greek tongue, and of a very interesting nature. He (his Excellency) took advantage of the ship's stopping there to reconnoitre the ruins whence they had been taken.

On arriving at Constantinople he will, no doubt, occupy himself in making those enlargements in the Imperial Museum which are necessary to provide a suitable home for the treasures he is bringing it.

NOTES FROM JERUSALEM.

I.

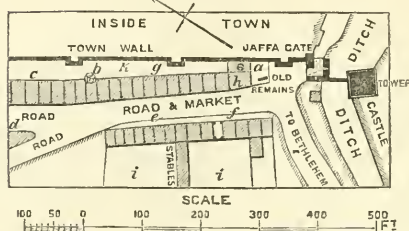
Jerusalem, June 8th, 1887.

1. *Tomb in Wady Yasâl.*—Referring to my first report on this tomb and the plan and drawings of it (*Quarterly Statement*, p. 112), I have to report that, according to order, all the chambers (except the one in which the sarcophagus stands) were cleared out, and not any *opening* found nor anything of interest. But as it was in the rainy season, the cistern has been full of water, so it could not be examined. Now it is nearly empty, and when fully dry I will examine it. In the meantime, the little hole in the rock wall, through which the stone box could be seen, was enlarged by chiselling, with the intention of making it so large that a man might go in. But by so doing, knocking much on the rock, a large piece of rock gave way inside the room, from its top, and fell down just on the sarcophagus and in front of the opening; so going on further in this way is useless, but it wants some digging from above, only I have not yet decided the spot where to do it.

2. *Second Wall.*—All my endeavours to get permission to dig for, anywhere in the street or inside houses, are hitherto without result, but I hope the time will also one day come. So I have nothing to report on this matter.

3. *Old Remains, &c., outside Jaffa Gate.*—(See sketch p. 214.) Outside the gate, but attached to the town wall, there was hitherto an open court fenced up. The ground belongs to the Greek Convent, so the Archimandit Ephthymias (or Ephthymus), who built the large new building near this gate inside the town is now busy building some shops, &c., also in this little court marked in the plan with *a*. By digging the foundations, old masonry of large stones with bevels (or margins round about) were found, but for a short piece only; finding it strong, further diggings were given up, and building was commenced on the old masonry. The old masonry was found only a few feet under the surface of the ground. As they were not allowed to attach the new building to the town wall, they were obliged to make a *new* wall, leaving a space of 6 inches between the two (the new and the town wall). By digging foundations for it, it proved that the town wall does not stand on the rock, but on earth. Going down only a few feet under the surface of the ground in front of the gate, they dug down about 8 feet deep and found no rock, but built also on the earth; further away from the gate, some years ago, new shops were built (*c*), and thus were found the ruins of an old strong tower (6 in plan). So it is now proved that the ancient wall stood about 26 feet further out, *i.e.*, lower down on the slope of the hill, and, as it seems, in a line with the north-western tower of the present castle—standing very likely on the site of the old Hippicus.

PLAN OF JAFFA GATE AND ITS NEIGHBOURHOOD.

Scale, $\frac{1}{1250}$.

Sketched by C. SCHICK, June, 1887.

- | | |
|--|---|
| <p><i>a.</i> Hitherto a court, now shops.</p> <p><i>b.</i> Some years ago found ruins of old Tower.</p> <p><i>c, d, e, f.</i> New shops.</p> | <p><i>g.</i> Older shops.</p> <p><i>h.</i> Custom House.</p> <p><i>i.</i> New Khan.</p> |
|--|---|

It is now proved that the Mohammedans, when building the present wall, not only put it more inside (as it is also, be it observed, on the northern side of the town), but put it simply on the earth, without any foundations. At *k* the earth became also removed to the level of the road or market in front of the shops; and there the wall is built of rubble about 9 feet high, where the layers of hewn stones began.

d, e, f. New shops have been built in the last years; also at *i* a new khan made. Also a great many new houses built outside the town. It would be well to enter all this in the Ordnance Survey Plan of Jerusalem.

4. *Triple Gate at Haram Esh Sherif*.—In the wall at the so-called stables of Solomon, especially in the region of the Triple Gate, openings were made, so that these substructures are now lighted—wanting no more candles when going there. This has the advantage of enabling one to see the state of things much better—every stone can be examined. A good deal of the accumulated earth there has also been removed, but it is not yet ended.

5. *Large Caves near Ramleh*.—Having reported on them, I have got a letter from the Secretary, saying that the Society wishes to know if they are artificial, and their extent. This letter I handed over to H.B.M. Consul, in order to get the Government's permission to undertake the work of a thorough examination of these caves. The result will afterwards be reported on.

6. *Mr. Lunetz's Book*.—There is a Jew here, Mr. Lunetz, by a very great deal of study day and night—having become nearly blind—issues every year a little book on Palestine matters, with the title "Jerusalem." The second has been recently finished, and he brought me a copy to send it to the English Palestine Exploration Fund, which I hope you will soon receive.

I wish also to express my humble and hearty thanks for sending me

Captain Conder's "Syrian Stone Lore"—which I have duly received, and am now about reading it. What an amount of learned information it contains! Accept my best thanks, and be kind enough to convey my thanks also to the Committee.

There is now a new plan and proposal to make a railway from here to Jaffa, and, as it was explained to me, the undertaking will bring much profit, and pay the interest of the outlay. The amount, or estimate, is grounded on the income the present carriage road brings in. It is now rented for 1,025 Turkish liras—not quite £1,000 English; they have many expenses yet, still they make a profit—it is reckoned 2,000 liras annually.

The Russian tower on the top of Mount Olivet becomes higher and higher; it is hoped to see from its top both seas (the Dead Sea and the Mediterranean), but it is not certain, only hoped for. On the west of the town two large buildings are now erected—Rothschild's Hospital and a Russian Pilgrim-house. The latter is very well built, and will become one of the finest buildings here. The hospital is carried out in a monumental shape, the lower part in a Cyclopean style. The Russian Church, near the Garden Gethsemane, is also near its completion as far as the shell—not the inside finishing—is concerned. Jerusalem loses more and more its old grand appearance, and acquires a modern look round about; inside it remains the same old city, except that the streets become better paved and graded.

Baron Rothschild, from Paris, who has been lately here, wishes to buy all the small buildings in the Mograbbin quarter and to pull them down, in order to make a large free place for the Jews, and so enlarge greatly their wailing place. He has thus to build new houses for the people losing theirs, in a better position of the town. I had to make an estimate of the probable expense, but the sum is so high that I think the idea will be given up and not carried out, at least not on such a grand scale. For his lady I had also to make an estimate to provide Jerusalem with water from a spring. I proposed Bireh; if this should be carried out, then we shall find the traces of the old aqueduct.

II.

Jerusalem, July, 1887.

DURING the last quarter I have sent you several communications, as I think it is better to send things as soon as possible, and not to wait to the end of the quarter.

But now I wish to give a general report on the various subjects.

1. *The Tomb in Wady Yasûl with the Sarcophagus.*—Several months ago we tried to make the small hole in the rock larger by chiselling, so as to enable a youth to go in for ascertaining the inside, and the situation of the entrance, so to be enabled to open it. But, unhappily, by the outside knocking, inside a large piece of rock gave way and fell down just on the sarcophagus and in front of the hole, so we were obliged to give the work up as it was impossible to remove the large piece.

By carefully examining everything, it was found that in the well, or cistern (so called), there seemed to be on one of its sides a kind of *door*, but as it was full of water we could do nothing but wait till it became empty, which is now the case; but I found the excavation was originally no well but a *tomb chamber*; it has on the west wall three loculi, and very likely it was intended also to make such on the three other sides, but the intention was never carried out. From this chamber there is no communication with the one in which the sarcophagus stands. That the inner chamber, full of "bones and mould," from which I hoped to find a passage, was cleared out by my men and no communication found, I have reported to you in one of my former letters. (P. 112, April *Quarterly Statement*.)

So the matter is rather difficult, and wants digging on a larger scale, but this will cost a good deal of money, which I am afraid to lay out, and also without leave from the Governor I can hardly carry on the work without falling in with difficulties; so, as I have waited long enough and chance has not led me into any other way, I will beg leave from the Pasha to let me dig there.

2. *Old Channel near Jeremiah's Grotto*.—In my Notes (p. 160, July *Quarterly Statement*), I wrote that the principal man of the place not being here but in France, the man in charge of the place will not give the permission to excavate there, so I waited till the "Reis"—the Captain—returned from France, which happened a few weeks after Easter. As he was busy with the French caravans of pilgrims I was told to wait till the pilgrims had gone; then the man fell ill and finally died; so matters stand as before. I am told the new "Reis" (Captain) will come in a few weeks, and then the work may be done.

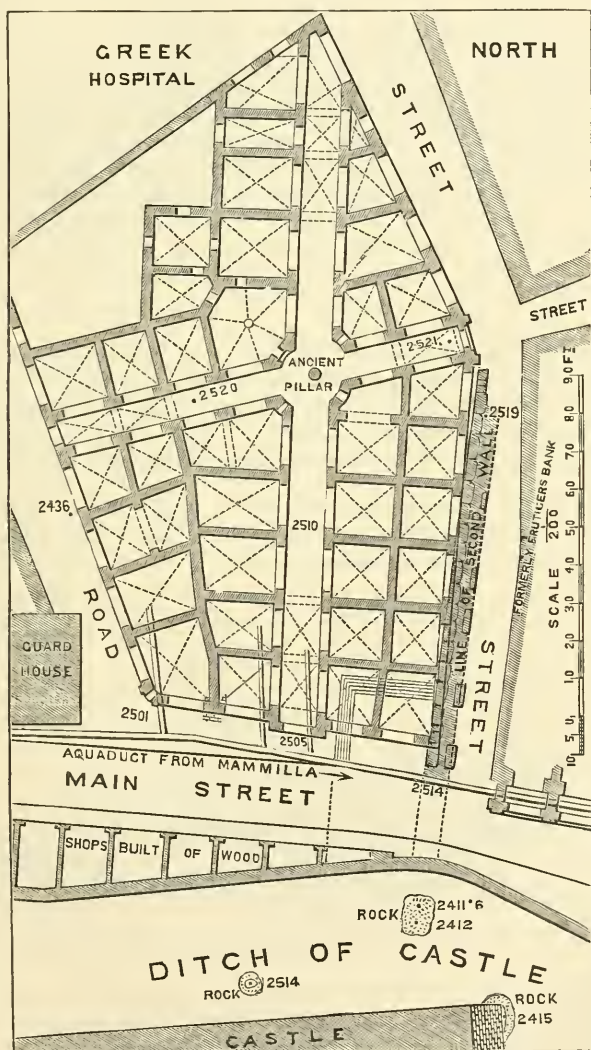
3 During the three last months the Municipality has gone on with their work of making sewers under the streets; they did it in the small square south of the Damascus Gate, and are now under the road "Tarik Bab el Amud"¹ (see Ordnance Survey, plan $\frac{1}{25000}$). At the square, about 6 feet under the surface, they found troughs, or smaller basins, of very smooth stones, and at its eastern end a cistern, which they will restore, and make of them a "Sabil" (or drinking place) there. On the old pavement of the square and further on under the street, about 8 and 9 feet under the surface (the old pavement) was found, consisting of smooth and large flat stones, about 1 foot thick, and from 3 to 6 feet long and 3 to 4 feet broad. The new sewer is to be laid deeper, so they are obliged to remove or to break these pavement stones. This pavement has a slope towards the south, similar to the street above it.

Under the street, going from the "Suk" (market) northwards in a straight line to the before-mentioned square, an old sewer was found, and simply cleared, which trended eastwards about 25 feet south of the square, and went a short distance on in a south-easterly direction under the eastern street, where it ended. I think it became destroyed when the present

¹ The eastern one, running down in the Wady.

houses were built. This part of the old sewer, now going from west to east under the houses, proves that in ancient times the houses did not go so far north as now, and thus the square there was at that time much larger.

No. 1. PLAN OF NEW BUILDING AND ITS NEIGHBOURHOOD, SHOWING LINE OF SECOND WALL.



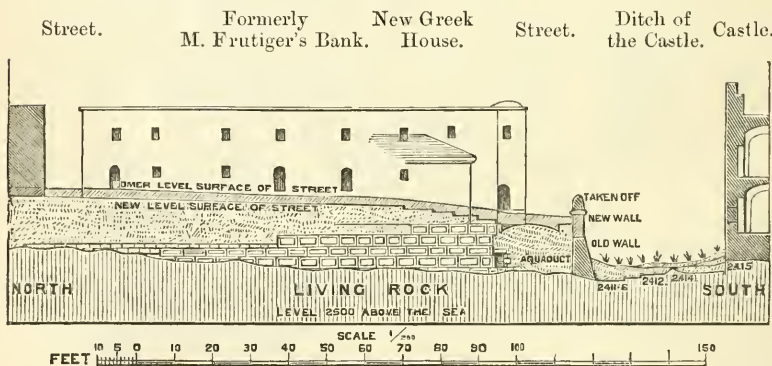
Drawn by C. SCHICK.

4. The building of a new Moslem school at el Manninjah (No. 42, Ordinance Survey Plan) has gone on very slowly, and nothing of importance has been found up till now, except that there are arches below, the entrances blocked up and partly full of earth. When cleared I will inspect them.

5. *Khankeh*.—I have sent you plan and sections of the quarter north of the Church of the Sepulchre (generally called "Hareth el Khankeh"), showing and explaining the features of the rock as laid bare when the sewer was made in the centre under the street. (See Notes on Jerusalem, p. 154.) During the work heaps of earth were put on the sides of the street; this, when cleared away, and just at the Khankeh Minaret, the new surface of the street was laid about 2 feet deeper, I found that the *rock is creeping out* on a place not observed before, on account of what I just now said. The rock can now be seen for a length of about 8 feet, 34 to 42 feet east from the middle of the entrance hall and door of the Khankeh building (close west of the minaret). At the place in my drawing (the section, p. 154) you will see a little door or the end of an old sewer; this is just on the western scarp of this part of the rock, in which is now cut one step to go up into the shop there; the third door east from Khankeh entrance.

6. Your letter, respecting the large cave near Ramleh, I have communicated to Mr. Moore, the English Consul. He thinks I must get permission from the Government for exploring: this he will procure when I want to go down; but for the present I cannot do it, as it is too warm and I am myself not quite well. However, I will keep your wishes in mind.

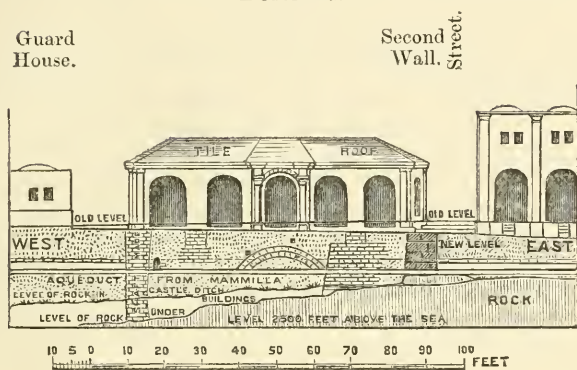
No. 2. ELEVATION, ACCORDING TO A LINE ALONG EAST SIDE OF NEW GREEK BUILDING AND TO CASTLE IN SOUTH, SHOWING THE REMAINING PORTION OF THE SECOND WALL.



Drawn by C. SCHICK.

7. *The Second Wall*.—This is my chief endeavour, but am sorry to say hitherto I have made very little progress, nor have I much hope for the future. Enclosed I send you some drawings connected with the matter. The continuation of the piece found when the Greek building was erected can,

NO. 3. ELEVATION, SHOWING ALSO FOUNDATIONS OF NEW GREEK BUILDING.



Drawn by C. SCHICK.

without excavations, hardly be verified;¹ and excavations are almost impossible, as the proprietors of the houses will not allow it, so we must wait for an opportunity. I went in all the houses so far as it seemed to me of any use, in order to see the masonry in cellars, &c., but found nothing of interest or any indications pointing to the said wall. What may be considered of the kind is at the sharp corner in the "Harat a Mawazine," where the number 2,532 stands (Ordnance Survey Plan $\frac{1}{2500}$ scale). There are large stones on the outside of the walls, which I consider as remains of the "corner gate," but it wants excavating, which will be done when the sewer is made.

In thinking the matter over I came to the conclusion that some diggings should be made in the ditch of the castle, in order to find out in what manner the second wall joined the castle wall; probably at the same time also to find the gate Gemath. This certainly I could not do without consent of the authorities. It was a long negotiation, sending me from Pilate to Herod, and from the latter to the first, or to a third. Finally I found it to be a matter for the *military* pasha; he consented, but with the understanding that the officers received a backsheesh, which I promised, and so I commenced the work. I had an idea that we had to go down 10 to 15 feet, and was astonished at finding the rock so near the surface, and in consequence of this no remains of the second wall were found, which must have been removed when the ditch was made. In three different places I found the rock very near the same level, or even a few feet higher, than it was found under the new Greek building. Of all this the adjoining plan, &c., will give full explanation.

In regard to the "Scarp," Dr. Merrill has, it appears, written what he

¹ The more so as not knowing the direction.

was told by the masons. I found out there is, except a few feet high, no escarpment. The chief mason who worked there told me also there is a scarp of rock about 12 feet high, but he could not explain to me how he came to this knowledge, and once he said, "Oh, only half a metre high." So it seems he told Dr. Merrill, telling him what he wished to hear. But the architect of the building and many other labourers told me there is no scarp of rock, but the rock surface slanting or shelving downwards towards west, so that it is clear the wall stood on the highest ridge. I wished also to examine the present aqueduct bringing the water from Mammilla Pool to that of Birket Hammân, inside the town, but it is choked with earth, and only a few inches left for the running of the water in winter, so that without cleaning it properly nothing could be done. I wished to ascertain throughout if it is masonry or partly hewn through rock; but I am convinced the latter is not the case, but it is all built *above* the rock, as I have shown in Nos. 2 and 3; its line is given in No. 1.

EXPLANATIONS TO THE DRAWINGS.

No. 1 is a plan of the new Greek building, with the second wall, as also other former buildings round about. When the house was built old masonry was found of small stones, built up in a *shop*, forming an angle, which is also shown, and three channels or conduits, which were found at different levels. The plan shows also the line of the aqueduct coming from Mammilla Pool; the main street and new-built shops of wood; then comes the ditch of the castle, showing the three places where, by digging under the surface, I found the rock. In numbers I give the height of the levels of the rock above the sea in many places. Those under the new building I was told (the depth of rubbish in each place) by the chief architect, and the mason I asked afterwards gave the same statements. The thickness of the second wall could not be properly ascertained, but so far as I myself have seen things and can judge, it was about 7 feet, perhaps more. All the workmen and the architect say something above two metres, which comes to the same measure.

No. 2 is an elevation, showing the lie of the rock with the pieces of the second wall. Also the present level of the surface of the street, and also the former level; the shading between the two lines show what has been removed from the ground, and the parapet wall of the ditch. The height of the neighbouring buildings of the castle wall and the new Greek house is also shown.

No. 3, an elevation from west towards east, showing all what is said under 2, the former level of the street, the new or present one, and the foundations of the new Greek building. In the west they sunk a shaft down to the rock, and filled it with masonry; for the next pier they did not go so deep, but found old masonry of some sort a few feet from the

surface and built on it, then for the two middle piers they put wood on the ground and built a flat arch over it, and on the arch the wall and piers ; the next pier they put on the old slanting masonry, and the last on the eastern corner on the remains of the second wall. There are four layers of old stones, the one at the bottom lying on a small rock scarp. The aqueduct coming from the Mammilla Pool is also shown, and then the rock as it is under the new building, and also at the castle ditch. Both elevations are put on a level at 2,500 feet above the sea.

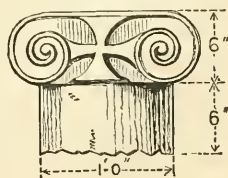
C. SCHICK.

RECENT DISCOVERIES.—NOTES AND NEWS FROM GALILEE.

By G. SCHUMACHER.

1. *Zimmârin*.—At the flourishing colony of Roumanian Jews, founded and maintained by the Baron Edmond de Rothschild, of Paris (situate at the ancient site of Zimmârin, and now called Zicron-Jacob), antiquities of interest are daily brought to light by the remarkable and warm attention which is paid to their discovery by its President, Professor Wormser. On the slope between the actual Khirbet Zimmârin (Palestine Map, Sheet VIII) and the south-western summit (marked 554 feet on the map), a large building, with remains of arcades, small and large rooms, partly paved with Mosaic, partly with marble-plates, was discovered. The walls built of large hewn stones of 2 feet and 2 feet 5 inches in length are set in mortar ; now and then a red brick piece masoned between the blocks is discovered. The mortar is good and contains lime and sifted parts of the local Maleki-rock, but no sea sand. A southern small room of about 6 by 4 feet was laid a foot lower than its neighbouring rooms, was carefully plastered, and contained, as mentioned, a marble floor ; the other divisions are not yet entirely opened, but also show a cover of solid plaster and side-openings near the floor similar to water conduits. The upper part or roofing, entirely destroyed, lies from 2 to 3 feet below the present surface of the ground, which consists of an alluvial brown earth. No marks or signs have been as yet discovered. To judge from the general divisions, we here have a bath, which by its position may have been supplied by a near spring, which may be hidden below the "Ulleik" bushes (raspberry) of the slope, and which, according to native views, are a true sign of live water. Continued excavations will soon enable me to furnish a plan of it.

Near by this bath several column capitals were found ; they are of a Corinthian and an Ionic style, with rough sculpturings. The Corinthian capitals are of marble, much defaced, but the acanthus-leaf ornament can still be sufficiently distinguished ; the Ionic specimens are of limestone, very primitive, and have the shape figured ; from which it is seen that the volutes end in a cross of Byzantine-

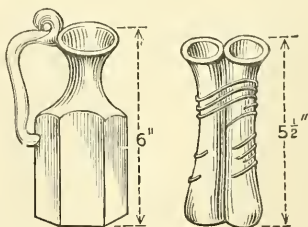
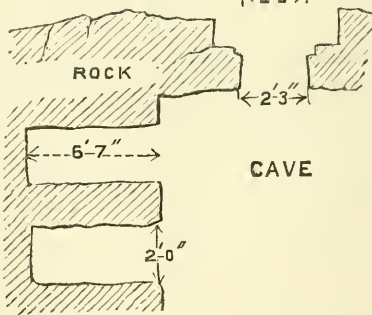
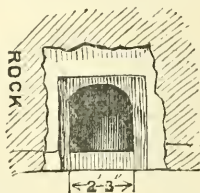
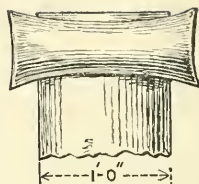


Constantine shape. To judge from other similar remains on which indistinct signs of Christian emblems are seen, I should place the mentioned baths with these remains, which evidently belonged to it, in the Byzantine area.

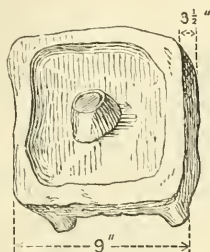
In addition to the above, the farmers of the colony, while ploughing, came upon subterranean caves which proved to be of a sepulchral character, and in their disposition similar to those described in the Memoirs and by me near Fureidis and Khirbet en Nuzleh. These caves generally lie on the slopes of the mountain, the summit of which is crowned by the colony, opposite old Zimmârîn to the south-west. The inference drawn from these discoveries is that the caves

evidently have never been opened before. Their entrance is formed by a square opening 2 to 3 feet wide and high, and a rounded upper part, as a rule shut by a simple stone gate. The interior shows a rock-cut room of from 10 to 15 feet square and 6 feet high; the main axis varying in every direction, as the caves honey-comb the whole slope. Each of the sides generally show 3 to 4 koka, and the end wall 2 loculi, giving 6 to 8 koka and 2 loculi in all; in some I found 7 to 9 koka, but no loculus. *Each of these graves yet contained human bones and skulls, some complete skeletons, ornaments in copper,*

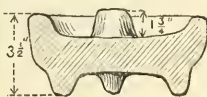
as arm bracelets, large nails, and defaced instruments; also quantities of all sorts of glass remains, single and double lachrymatories, drink-dishes of glass, and glass bracelets, the most of them complete, well conserved, and especially the small lachrymatories of a wonderful thin shining glass composition. One of the single lachrymatories has a sexagonal form, and looks, if abstracted from the primitive work and the antique glass, quite modern; the double lachrymatory, although one single piece of glass, is twisted by a thin silver wire, partly broken, which must have been formed into the glass while still warm. At the top of a skeleton, next to the head, a small mortar of basaltic stone, 9 inches broad and but $3\frac{1}{2}$ inches high, standing on three legs, was



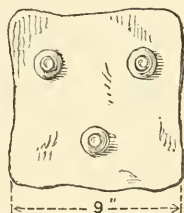
found ; a small rounded piece of a hard stone mass yet lie in the interior of the mortar, showing clearly its character as a pounder, probably to



Mortar of basalt.



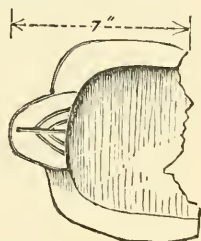
Section.



From below.

pound in it spices and use them in the memory of the dead. In another grave (loculus) a similar mortar, but broken, of marble was found ; it shows two-sided handles, on one of which I discovered a five-armed candlestick, primitively sculptured, thus :—

On other basaltic mortars there are also indistinct signs closely alike the candlestick mentioned. The discovery of this ancient Jewish emblem and of that of lead sarcophagi with grape ornaments, found years before at this place, together with the Christian emblems already mentioned, prove that Zimmârin was once occupied by both religions ; the first, the Jewish, being probably the more ancient.

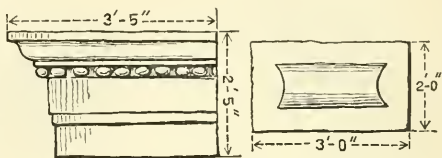


Marble mortar.

The excavations on the slopes, where many signs of tombs are yet discoverable, will still be continued, and it is to be hoped that they will gradually lead to good results. The ruined site, named *Umm el Jemâl*, one mile north-east of Umm et Tât (Sheet VIII), will be next put to a thorough examination by being settled by the above-mentioned Jewish Society. The height of the neighbouring village, *Shefeia*, I found to be 304 feet above the Mediterranean.

2. *Tiberias*.—The road from the city of Tiberias to the hot baths is nearly finished, and a carriage drives regularly, at the expense of the municipality, over the *débris* of Roman villas, to bring the sick and not sick to and from the renowned hammi. The heaps of ruins which were opened at the construction of the road, proved to be, for the greater part, old baths, as a regular course of aqueducts of 1 foot in depth and 10 inches in width, masoned and well plastered, could be followed up from near the hot baths to the present Jewish cemetery, running *through* the mentioned buildings, and the native traditions, that the hot springs formerly were in the interior of the city, may find an explanation in the above. Most of the Roman buildings along the lake, familiar to every explorer of Tiberias, are now totally destroyed by the “*chaussée*,” but not

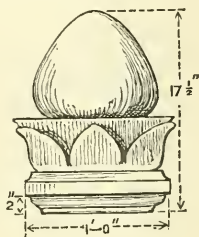
without great efforts, as the masonry work was an exceeding solid one. Among the basalt building stones near the foundations, several large carefully hewn blocks of a strange white lime-rock were found, as if they belonged to a preceding building. They were from 3 to 5 feet long, 2 feet high and wide, and showed Roman mouldings, thus :—



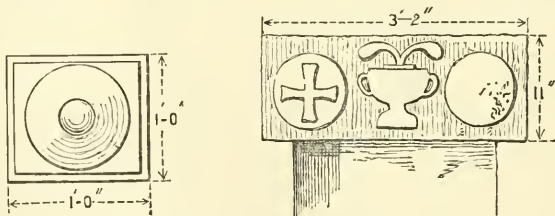
In comparing the different remains of Tiberias along the lake, I find that the wall remains south of the hot baths, which, commencing at the shore, take a western course towards the mountains and end at the building of Rabbi Maier, have the highest age among all ; larger, huge building stones, different mortar and construction. They embrace the largest area of the old site.

Among the old Jewish graves, which I mentioned in a former report, lying north-west of the city, the road constructions brought the sketched top-piece to the daylight, hewn of basalt.

At the Jâmia el Bahr, the mosque on the sea at Tiberias, I discovered, among other ornaments, the following Christian emblems on the basalt lintel of a side door ; the ornamentation has a Haurân character.



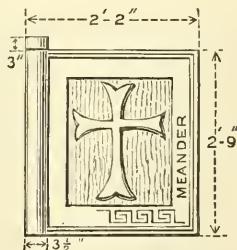
Basalt top-piece,
Tiberias.



Jâmia.

In the yard of the Latin convent of Tiberias, where foundations are laid for a new "pilgrim house," a large wall, 4 feet thick, running parallel with the shore, was struck ; among the building stones the annexed stone gate of basalt was also found :—

On one side it shows a cross embraced by a meander ornament. The gate is 6 inches thick.

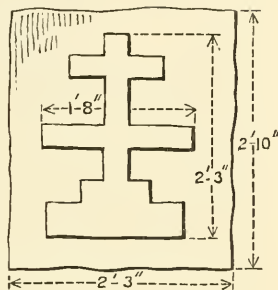


Basalt gate.

3. 'Akka.—The road works have also here brought a stone to light

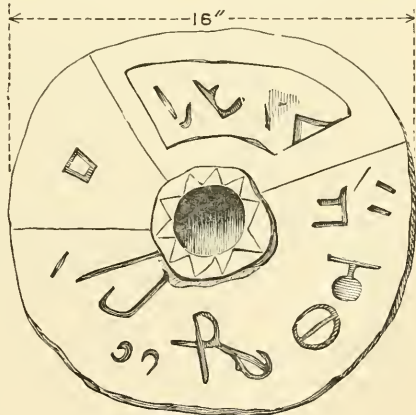
found south of the present Christian cemetery, half way between the gardens on the large Haurân (Safed) road :—

The stone shows a curious double cross on a base, carved in relief, and seems to be of some age ; a priest who stood near when I sketched it, pretended that it represented (known by its form) the grave of a bishop ; but no bishop has been buried near here for a century and more. Against any other sort of excavations the military Government of Akka puts forward every objection possible, which is a great archaeological loss.



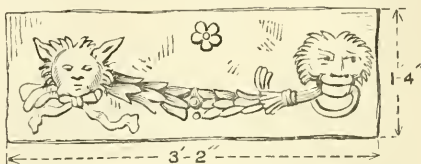
4. *Rushmia*.—The work for a suggested aqueduct from the renowned spring of this crusading castle near Haifa to the city, has again begun. The spring was formerly led to the wâdy near by a vault, and heaps of large hewn building stones, a gigantic trough, and remains of pottery are found. The head of the family of the *Sahly* at Beled esh Sheikh, near Haifa, convinced me that the old name of Rushmia was *Deir Mishnia* دير مشنيا, and “was only corrupted by the Franj,” and that of *Beled esh Sheikh* was *el Mughâr* المغار, it being altered from this original name, since the Sultan gave the village to their grandfather, a grand Sheikh of the last century, as a recompensation for his pilgrimage to Mecca. This history was confirmed to me by other old Sheikhs of adjacent villages.

Beirut.—In the court yard of the Serail, among antiquities of more or less value, I observed on a sort of small grinding stone (sand-stone), 16 inches in diameter, the following very much defaced characters, which may be Hittic inscriptions. The few minutes I could spare to copy them sufficed not for a squeeze ; the stone was immediately exported to the Constantinople Museum, together with the Saida antiquities. I could not make out from whence it was brought ; some said from Saida, some from Homs.



5. *Saida*.—I am able to forward to you to-day a description of the excavations and discoveries (sarcophagi) of Saida, noted in the scientific paper “Le Bachir,” of Beirut, very exactly by those who stood in closest relation-

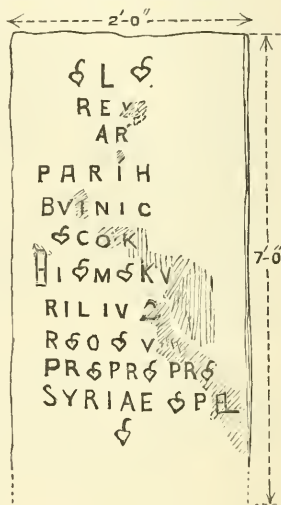
ship with the excavations (see p. 201). Of special interest is the inscription on the recently discovered Phœnician sarcophagus, which, according to decipherings obtained from Paris, reads as follows:—"I Tabnite, priest of the Astarte, and King of Sidon, who lies in this tomb, say: Come not to open my grave, it contains neither gold nor silver nor treasures. Whoever will open this tomb shall have no prosperity under the sun, and shall find no rest in his sepulchre." This inscription indicates that the mummy found in the sarcophagus is that of Tabnite, King of Sidon, the father of Eshmunazar, King of Sidon, whose tomb was transported to the Louvre, and which was also crowned with an inscription.



Saida, Khân.

Photographic views of the grand discoveries at Saida will, I hope, follow. I had been called to the place and have examined the discoveries with His Excellency Hamdy Bey, the Director-General of the Constantinople Museum. They are superior to any other classical work I came across, and it is a pity that no more excavations are made, as the vicinity clearly states the presence of a large necropolis.

In the walls of the new Khân I found the annexed relief ornament, worked of sandstone. On my way homewards I found, near Saida, in the field, an old broken granite column, 2 feet in diameter, on which the following defaced Latin inscription was readable.



Saida Column.

In the walls of the new Khân I found the annexed relief ornament, worked of sandstone. On my way homewards I found, near Saida, in the field, an old broken granite column, 2 feet in diameter, on which the following defaced Latin inscription was readable.

(Haifa) *Tell es Samak*.—In addition to Mr. Oliphant's report on our excavation work done at this site, I must add that the Government has stopped the work, and has forbidden a continuation of same for the moment.

G. SCHUMACHER.

Haifa, June 30th, 1887.

THE CANAANITES.

THE fact that the Hittites were a non-Semitic people raises the question whether other Canaanite tribes may not have been also non-Semitic. It is often assumed, without any very evident grounds, that the Bible represents all these people to be Semitic. On investigating this question I have been much struck to find how many names connected with the Canaanites have either no derivation in Hebrew, or one which is extremely forced and improbable, whereas the large majority of geographical names and the personal names of Semitic personages have well-known and simple derivations.

This question is one of difficulty, requiring very sound knowledge both of Hebrew and also of the older non-Semitic languages, and although I put my notes in order months ago, it would be premature to attempt an exhaustive treatment of the subject. It is generally recognised that the study of Assyrian, Babylonian, and Akkadian will have in time a very important influence in modifying existing views as to Hebrew, and as to the Old Testament, and it seems to me that part of the inquiry will be into the names of the Canaanite tribes and of their towns, which have no Semitic derivation. I will here briefly point out a few of the more striking results of the researches already made.

Ham.—In Hebrew, "hot," or "black," has been compared with Khammu, a name of Anu, the Akkadian Anna (or Ana), the heaven god.

Cush.—The son of Ham; in Hebrew, "dark" has been connected with the name of the Cossœi, or Kassî, an Altaic tribe. In Akkadian, *Kus*, or *Kusu*, also means "shadow," or "dark." *Cusu* was one of the fourteen Babylonian gods.

Towns of Nimrod.—These appear in several cases to have Altaic names, Babylon, or Babilam, Mr. Pinches believes to be non-Semitic (Babylonian Record, No. 4, p. 54.) Erech is probably Eri-ek, or Ur-uk, "great city." Akkad is the word whence the Akkadians or "mountaineers" were named. Shinar Lenormant would connect with the Sumeri, or "river dwellers" (though some hold this word to be Semitic). Calneh is rendered Kal-anna ("fortress of Anu") by Professor Sayce, or may be simply Kal-na, "high fortress." The name of Nineveh also is possibly Altaic.

Philistines.—Hitzig believed these people to be Pelasgic, in which case they would apparently be Altaic, which may agree with their being uncircumcised. The root, *Palas*, with the formant of agency, *ik*, or with the Semitic plural, gives us Pelas-ik and Pelesh-im. Pal in Akkadian means a "sword," and also "a chief," and the *is* or *sa*, is a personal suffix.

The towns in the Philistine country, Ascalon, Ekron, Gath, Ashdod, Gaza, have not always a good Semitic derivation, especially Ascalon. Saph and Goliah are also Philistine names not translated. Saph may be connected with the name Sap-ak for a Susian deity, and (as noted by Rev. C. J. Ball) with Sap-lel, the Hittite chief. Ishbibenob is another curious Philistine name. Goliah may be connected with Gal, or perhaps Gal lu,

“great man,” in Akkadian. Akish and Maoch, kings of Gath, have no Semitic derivation, and the termination in *och* or *uk* suggests an Altaic origin, while Ak in Akish may mean “king.”

Phœnicia.—While the Phœnician race of historical times was certainly Semitic, there is reason to suppose that a non-Semitic population also inhabited Phœnicia. Many of the Phœnician deities mentioned on the monuments (in the Corpus of Semitic Inscriptions, whence I have extracted a list) have no evident Semitic derivation. Tammuz, Ashtoreth, and Nergal, worshipped in Phœnicia, were Akkadian deities originally. Tzid, Baal Sillek, Bod, Anath, Tanith, Melcarth, Abset, all present difficulties as Semitic words. Chemosh, who seems to have been worshipped in other countries besides Moab, may also have been non-Semitic. On a well-known seal his name appears as 𐤁𐤌𐤔, and has been very generally recognised in the name Carchemish (the Hittite capital), Kar in Akkadian meaning “fortress.”

Hittites.¹—It has been said that the Bible and the monuments are not in accord, the former making the Hittites Semitic, but the latter non-Semitic. It is certain that Hittites with Semitic names are mentioned in the Bible, but it is worthy of note that the Hittites of Hebron in Abraham’s time appear to have had non-Semitic names. Mamre and Aner have no good or recognised Semitic derivation. Anak is rendered “long necked,” and Ephron “belonging to a calf,” which are renderings hardly superior to the attempts of the worthy Cruden. Now Anak is a well-known Akkadian sound; An-ak, “great god,” or “chief-king,” a name of the god Nebo; and from Anak the Anakim (who were perhaps the Anaukas of the Egyptian monuments) were named. On the other hand, when we find Esau’s Hittite wives with Semitic names we must not forget that they were descended from an earlier alliance of Ishmael with the Hittites, and were thus apparently of a mixed stock—the same mixed stock which existed contemporaneously in Babylonia—Arab Tatar, or Semitic Turanian.

Hivites.—The Khuim, or Hivites, may perhaps be connected with the Kui, a tribe mentioned on cuneiform monuments. Khu and Ku not only in Akkadian, but also in various Finnic dialects, signify “man” and “high.”

Esau.—Esau’s own name has been connected with the Akkadian Usu by Mr. Tomkins. Usu signifies originally “red” (Us, “blood,” Usu, “sunset”), and thus seems to be the Altaic name of which the Semitic form was Edom, or “red”—Esau’s other name.

Toi.—The King of Hamath in David’s time has a name rendered by Hebraists “wandering,” a very improbable derivation for a royal name.

¹ As regards Hittite pigtails: the Chinese pigtail and “peach,” or partial shaving, is not an ancient Chinese custom. It came in with the Tatars from the West, being an early Tatar fashion. It is among the Manchu Tatars that the nearest approach in grammatical structure to the Akkadian has been recognised by Lenormant.

In Altaic languages *Ta* means "powerful," or "noble." In Hittite royal lists we find *Ta-Tar* and *To-Tar* as kings.

Girgashite, a word apparently non-Semitic, may be connected with the word *Kerek* for "fortress," which occurs in various Altaic languages, and with *Kur-uk*, "mountain," also an extant Altaic word.

Sinite, "the inhabitant of Sin" (סין), recalls the name *Sinai*, and the desert *Sin*, or *Zin* (זין or סין), which names have no good Semitic derivation. I would suggest a connection with the Akkadian *Zin*, "desert." In this case the name *Sinai* is the non-Semitic word for which *Horeb* ("dry," or "desert") is the Semitic equivalent, and *Horeb* was the other name of *Sinai*. It is worthy of notice that the Hittites are not the only Canaanite people mentioned on the monuments. The Amorites (*Amaur*), and perhaps the Hivites (*Kui*), possibly also the Zemarites (*Samalli* of the cuneiform texts), may be added.

Rephaim, a word used for giants, and also for ghosts, is made equivalent to *Nephilim*, which *Lenormant* has shewn to mean "giants," as a Semitic word. The word, though with a Semitic plural, may perhaps be connected with the Akkadian *Rip*, a "warrior" or "hero."

Zamzumim.—This word is thought by some writers to be a clerical error for *Gamgunim*. This recalls the tribe of the *Gam-gami* mentioned in cuneiform texts, the original root, *Gam*, meaning to "bend," or "subdue."

Amalekites.—The name of this tribe also seems to be non-Semitic. Since the Semitic *K* and the Akkadian *G* are often equivalent, *Amalek* might mean *Amal-ge*, "dweller below," as the tribe inhabited the lower plateau of the Sinaitic peninsula under the Judean mountains. *Agag*, the Amalekite king, has a name also of non-Semitic appearance, perhaps derived from the root *ag*, "strong," in Tatar and other Altaic languages, as in the Akkadian *Agga*, "strong," and *ak*, "male," or "king." "Higher than *Agag*" in this case assumes a special meaning, viz., "higher than the high one" (cf. Num. xxiv, 7). *Agag* may have been an Amalekite dynastic name. *Amalek*, as a child of *Esau*, would be connected with the Hittites (see Gen. xxxvi, 12), but the tribe is also mentioned in connection with *Abraham's* times (Gen. xiv, 7).

Avim (Deut. ii, 23), an early tribe whose name perhaps survives at *Beit Auwa*, east of *Philistia*, may perhaps be the same as the *Amu* of Egyptian monuments, since the א and מ are hardly distinguishable in early times. *Balaam* belonged to the *Beni Amu* (Num. xxii, 5 : cf. Deut. xxiii, 4), on the *Euphrates* at *Pethor*. The translation of *Balaam's* name "devourer") as a Semitic word seems hardly satisfactory.

Og (Deut. iii, 11) was a giant, and his name may be compared with the Altaic *ug* or *uk*, meaning "big."

Sirion, the Sidonian name of *Hermon*, may also be compared with *Sorakte*, "snowy mountain" in Etruscan, the Altaic root *Sir* meaning to "shine" or to be "white."

Araunah or *Ornan*, the Jebusite king, might be conjectured to mean *Eri-unu* or *Ur-nun*, both meaning "chief of the city." The two forms have thus the same signification.

Gog and *Magog* suggest the Altaic root, meaning "fierce" or "mighty," found in Tatar languages. In this case *Ma-gug* means simply "land of *Gog*."

Tubal and *Meshech* have been identified with the *Tuplai* and *Muscai* of the cuneiform monuments. *Meshech* may perhaps be derived from *Mus-ak*, "great warrior," as in Akkadian.

Patriarchal names.—Lenormant some time since connected *Seth* with the deity *Set*. *Lamech* and *Enoch* have no very certain Semitic etymology, but might in Akkadian be rendered *Lam-ak* and *Enu-uk*, "great hero" and "great lord." Some double names also may be so explained (as *Esau* and *Sinai* above noted—in Hebrew *Edom* and *Horeb*), and the forms *Sarai* and *Sarah* might thus be explained, as *Sar* ("prince") is both Semitic and also Akkadian. The influence of the Altaic languages on that of the Semitic race in Babylonia is very generally recognised, and a good many Altaic words in the Bible are already admitted by general consent, of which a list may be convenient.

Old Testament.	Altaic.	Meaning.
Accad (country)	Akkad	"Highland."
Arioch (king)	Eri-Aku	"Moon worshipper."
Babylon (city)	Babilam	
Calneh (city)	Kal-na	"High fortress."
Haran (country)	Kharran	"Road" or "height."
Chedorlaomer (king) ..	Kudur-Lagamar ..	"Worships Lagamar."
Erech (city)	Ur-uk	"Great city."
Magog (country)	Ma-gug	"Land of <i>Gog</i> ."
Media (country)	Ma-de	"Inner land."?
Moloch (Deity)	Mul-ge	"Lord beneath."
Shinar (land)	Su-meri ?	"River people."
Tammuz (Deity)	Tam-zi	"Sun spirit."
Tartak (Deity)	Tar-tak	"Lord of the stone."
Tidal (Thargal) King ..	Tar-gal	"Great chief."
Ur (city)	Ur	"Foundation."

The study of the Canaanites on these principles will lead us perhaps to a better understanding of the earlier books of the Bible. It not only shows that there is no discordance between the Old Testament and the monuments as to the original stock whence the Canaanites were derived, but it also serves to explain in a very simple and natural manner the reasons for the antagonism between the Hebrews and the Canaanites. In race, in language, in customs, in religion, the Canaanite and the Hebrew race were opposed.

At the same time it is certain, from monumental sources, that there was a large Semitic population in Palestine at the time of the conquest, and we should expect this from the Old Testament account, since the children of *Lot*, of *Ishmael*, and of *Keturah* were spread abroad,

as well as the half-bred descendants of Esau. It is clear, from the monuments and from the account of Abraham's transactions with the Hittites of Hebron, that the mixed population of Canaan was in an advanced state of civilisation. There were cities and landowners, traders, architects, and metallurgists in Canaan at a time when the Hebrews were yet nomadic, and the Hittites, long before Joshua, almost equalled the Egyptians in culture and power. In later times the word Canaanite appears to have been thought equivalent to merchant (Job. xli, 6 ; Prov. xxxi, 24). The importance of the great Altaic stock, of which the Canaanites were a branch, is becoming more and more evident. There seems to be reason to suppose that Altaic tribes reached Egypt and left their mark on the Egyptian language. Thus the Philistines in the Bible are said to have been of Egyptian origin, and, on the other hand, appear to have been Pelasgic or Altaic. The same stock existed in Italy as Etruscans, in Spain as Iberians. The Siculians, Ligurians, Aquitainians, and Silures, belong to the same stock, as do the early tribes of Asia Minor. In Europe the Aryans drove out or absorbed these early Turanian tribes, and in Western Asia the Babylonians, Assyrians, Phœnicians, and Hebrews, partly exterminated, partly absorbed, the Altaic tribes known as Akkadians, Sumerians, Kassî, Hittites, &c. Yet, to the early civilisation of these very tribes they themselves owed in great measure their own advance in literature, in trade, in metallurgy, and in many other elements of primitive civilisation.

C. R. CONDER.

THE HITTITE LANGUAGE.

DURING the last quarter my attention—as far as professional work leaves me time—has been directed to the one objection to the proposed identification of the Hittite language as Altaic, which can be considered important. It has been urged that the sounds attaching to cuneiform emblems do not represent Akkadian words, but only syllables forming part of Akkadian words, just as in Egypt the syllables were derived from words not monosyllabic. That, for instance, the syllable *Ma* attaching to the emblem for “country,” is not to be taken as a word, but as a syllable derived from the word *Mat*. Lenormant held a different opinion. He regarded *Mat* as a contraction of *Mata*, a derived word composed of the old *Ma*, “country,” + *ta*, a suffix, and it is certain that the root *Ma* forms the word for country in many Altaic languages.

In order to ascertain how far it is possible to make sure of the pronunciation of the ideograms and of the existence of monosyllabic words in Akkadian, it appears to me that the only safe way is to carry on that comparison with living languages on which Lenormant relied, and which Dr. Isaac Taylor successfully applied to the case of Etruscan. For this

purpose I have prepared an index of some thousand Akkadian monosyllabic sounds, which are supposed to represent word-roots, and have gone on to compare these with the monosyllabic roots in Finnic and in Tatar languages. It appears that the large majority of these monosyllables exist, either in Tatar or in Finnic, and a great many are common to both branches of the Altaic languages. In addition to this a certain number have been found by Prof. T. de Lacouperie in the oldest known Chinese about 900 B.C., and others are recognisable in Etruscan. In Basque others may be easily recognised, and a certain small proportion of Egyptian words are identical in sound and meaning with the Akkadian.

The result of this comparison—not as yet complete—is to show very clearly that the monosyllabic sounds attaching to the cuneiform emblems are real and complete word-roots in a very large number of cases, and that they include both “open syllables,” like Ma, Ku, &c., and “closed syllables” like Tak, Tin, &c. In addition to this, I find that the majority of the sounds recoverable from the Cypriote in Hittite may thus be shown to be Altaic words.

In many cases the Susian and the Proto-Medic words are radically the same as the Akkadian, especially as regards post-positions. Such an inquiry shows how widely spread are the affinities of the Akkadian, and thus serves to justify the use of Akkadian as a basis for decipherment of the Hittite texts.

I have further prepared an analysis of the geographical lists of the Hittite country, the original hieroglyphics having been kindly supplied to me by Rev. H. G. Tomkins. This, with other lists from the same part of the world, serves very clearly to enforce the same lesson as to the character of the Hittite language.

There remains, however, a good deal to be done before this work is fit for publication.

The objection which may be raised to such an inquiry is that the results will be too general, but it appears to me that if it is shown that the Finns, Hungarians, Lapps, the Siberians, the Chinese, the Etruscans, and the Egyptians even, used the same monosyllabic roots which we find in Akkadian and in other languages of the cuneiform inscriptions, the case is further strengthened in favour of these roots having existed in the Hittite dialect.

It is, however, by the grammar rather than by word roots that the affinities of the Hittite language are to be best traced. One of the main objections to the classification of Akkadian as a Turanian language lay in the differences between its grammar and that of the living Finnic languages. Lenormant has said that the nearest approach to the older construction is to be recognised in the Mantchu Tatar, especially in the formation of the verb, which resembles that of the Akkadian. It will, I think, be clearly provable to any who will inquire closely into the matter, that the grammatical construction of the Hittite texts is that of the earlier Altaic languages, not that of the modern Turanian tongues. The same is observable to a certain extent in the geographical lists; and, although I

have never said or held that the Hittites spoke Akkadian, I think it will prove that Akkadian is the most valuable guide we can follow in decipherment.

As regards the subject of the texts, it has been disputed that they are likely to be charms or magical sentences. On this point I have at present only to point out the frequent repetition of the names of deities and the occurrence of the peculiar heads with horns or long ears and protruding tongues, which appear to me certainly to be intended to represent demons. Among the Chinese, we have representations of demons often with protruding tongues and with short horns on the head. The "Gorgonian heads" in Etruria have a protruding tongue, as has the head of Medusa in archaic Greek representations. The protruding tongue is common to the Indian infernal deities, to the Mulge of Phœnicia, and to the Egyptian Bes. The Etruscan infernal deity, Charun ("the evil god") is represented with open mouth and huge square ears. It appears, therefore, that among Turanian peoples the idea of a demon is commonly denoted by horns or long ears and a protruding tongue. It does not seem very evident what other idea can be presented by such an emblem. The text in question must, therefore, bear reference to gods and to demons.

In conclusion, I would note that pigtailed came to China from the Tatars, and that the ordinary representation of a Chinese shoe is not unlike the Turkish, Etruscan, and Hittite curly-toed shoe, which has been called a "snow shoe"—a somewhat misleading term. The true comparison with the shoe of Asia Minor has been suggested by Sir C. Wilson. The two-headed eagle has been regarded as one of the most distinctive of Hittite emblems—occurring in Cappadocia; and it is, therefore, important to note that Etruscan representations of this curious fowl may be found figured in Dennis' Etruria. If the eagle alone were sufficient evidence, its testimony would be that the Hittites were an Altaic people like the Etruscans.

C. R. C.

SAMARITAN CUSTOMS.

THE first answers yet obtained to the "Questions" as to the natives of Syria come from Shechem (Nablus), and relate to one of the most interesting of the mixed nationalities of Palestine, viz., the Samaritans. The Rev. C. Fallscheer, to whom I wrote, is on very friendly terms with the present Samaritan High Priest, Jacob, and I attach the more value to his notes because they are in great part derived from the best Samaritan authority.

Some of the most interesting replies are here detailed, with an occasional note, showing relative value or due to personal observation.

Feast of Tabernacles.—"Is celebrated every year, on the 15th day of the seventh month. On the first day of this feast every Samaritan father

of a family ornaments his room (see Levit. xxiii, 40) with boughs of palm, pomegranate, lemon, orange, and some kinds of grass, all the branches being hung from the ceiling. They dwell in this room seven days, and remove the adornment on the eighth day."

NOTE.—Among the Jews, I believe, the booths are never made inside a room but in the open court (*cf.* Neh. viii, 15), or on the roof. Booths on the roof are commonly used in Palestine for living in in summer.

Fast of the Atonement.—On the 10th of seventh month. From sunset on the 9th till sunset on the 10th all the congregation, except sucklings, fast. There are special prayers for the day, and during the night they repeat the Books of Genesis and Exodus by heart, no lights being allowed in the houses. After sunrise they use books for the prayers, and read Leviticus, Numbers, and Deuteronomy. The Pentateuch is completely read during the twenty-four hours. During these two festivals, and at Pentecost, special prayers are said on Gerizim for the restoration of the Temple on the mountain.

Circumcision.—Takes place in the father's house on the eighth day after the child is born. Special prayers are said, and passages in the law concerning the rite are read; an ancient hymn invoking blessing on parents and child is sung.

"In this hymn they pray for a certain Roman soldier named Germon, who was placed as sentinel over the High Priest's house by some Roman Emperor; because of his kindness in not preventing the rite of circumcision. They offered him money, but he would not accept, only asking to be remembered in their prayers for the future."

Talith.—The Samaritan High Priest wears a talith (or sacred scarf) on his head, when raising the Roll of the Law for the congregation to see during the service.

The Red Heifer.—In answer to the question, how impurity can be removed in absence of the ashes of the Red Heifer, it is remarked that these ashes purified only after contact with a dead body. As there is now no Temple, the Samaritans never touch a corpse; even when a Samaritan mother sees her child about to die she leaves it, and the dead are washed and prepared for burial by Moslems.

The Water of Jealousy.—This is not now used, since the destruction of the Samaritan temple.

Loosing the Shoe.—This ceremony is still practised by the Samaritans.

NOTE.—It also still is practised by the Jews, but I am informed that the woman does not spit in the man's face, but only "before his face."

Divorce is said to be uncommon. The number of women is comparatively very small. When a woman is divorced for misconduct the dower is forfeited to the husband.

The Poor.—The Samaritans are said to be very charitable to their poor.

Kabbala.—The Kabbala is still in existence among them, as shown by the following story: The missionary, having urged that the law alone was not sufficient for salvation, a priest replied:—

"You know that the first letter of Genesis in our language is *Ba* and the last letter of Deuteronomy is *Lam*. These two letters make the word *Bal*, meaning 'enough,' and also *ba* in arithmetic is 'two,' and *lam* is 'thirty,' or together thirty-two; and thirty-two is the perfect number of the teeth of man. Therefore the Pentateuch is sufficient for salvation."

Charms.—The Samaritans prepare charms, but say that these are forbidden by the law, and not to be used by their own people, but by strangers. The charms are written by the priests to heal sickness, to make women conceive, to promote love, &c.

Alexander the Great.—The Samaritans relate the same story of his visit to Gerizim which Josephus relates of his visit to Jerusalem.

NOTE.—If I remember right, not having the book by me, this comes from the Samaritan "Book of Joshua," which some writers have confused with the Samaritan Chronicle.¹

Complexion.—A few are red-haired with blue eyes; the majority have dark eyes and black hair.

NOTE.—I have seen some handsome specimens of red-haired Jews (with blue eyes, I believe) among the North African Jews in Jerusalem.

Language.—The commonly spoken language is Arabic, but the priests can still speak Samaritan.

Dress.—The women are veiled in public. They arrange the hair in ten or twelve plaits or pigtails. There is no difference of dress between married and unmarried, and the children's dress is much like that of adults—the ordinary Oriental costume of Syria. The distinctive mark is the red turban (a fine crimson) of the men; unmarried women do not wear gold ornaments, rings, ear-rings, necklaces. The Samaritans do not wear the "lovelocks" of the Pharisees.

Cutting the Hair.—When first cut the priest cuts off the first lock, the barber finishes the work.

Trades.—The men are merchants, clerks, weavers, tailors, carpenters. The women are engaged in household employment.

Education.—Reading in Samaritan and Arabic, writing, and arithmetic; also singing the old hymns without any instrumental music.

Taxes.—In addition to other taxes they pay the *Askeriah*, or exemption money from military service, about 10 fr. a year per man.

Amusements.—The women employ a female Muhammadan singer who beats a drum; they join in in the song, but sing badly. The men sing by themselves in Hebrew (Samaritan?) and Arabic. They relate Bible stories to the children or stories of their forefathers, but the priests say the law forbids them any games. They read no books but their own, and some Arab newspapers from Beirut.

¹ Dr. Robertson Smith has spoken of the Samaritan Chronicle as a tissue of absurd fables. Evidently he confuses this matter-of-fact work with the Samaritan Book of Joshua. (See my paper on Samaritan Topography Survey Memoirs, Vol. Special Papers.)

Birth.—Salt water is poured on a child when born, and it is then swaddled.

NOTE.—The rubbing with salt is a very old and widely observed custom.

Marriage.—The men at the age of sixteen, the women of fourteen. A few have more than one wife. The eldest son inherits two parts, the other sons one part; the daughters each a half part of property.

Burial.—All the law is read up to Deut. xxxii before leaving the house and the rest at the tomb. The family mourn seven days, during which the priests read the law in the room of the deceased. Both men and women follow the corpse to the grave. During the year after death the family visit the tomb once every month.

Genealogy.—They claim to possess the genealogy of the High Priests from Aaron to the present day.

Nothing new has yet been elicited concerning Samaritan literature beyond what is already well known to scholars.

Music.—They appear not to have any instrumental music.

There are many other answers which I have not yet been able to compare with the questions.

C. R. CONDER.

BOAT-SHAPED GRAVES OF SYRIA.

IN passing through the Anti-Lebanon District of Syria I noticed that at some of the villages the graves possessed the form of a boat or skiff. The fact appeared remarkable, in a district far away from the sea, away from navigable rivers, and among villagers whose daily occupation is not connected with boats at all. I asked myself what could be the intent of the boat, and after comparison with the graves at other villages I asked whether the prow and stern of a boat may not be represented in the head and foot stones of ordinary graves?

At Cairo I had noticed the tombs of the Mohammedans with two stelæ or upright stones towards the head and foot, though far from being uniformly at the head and foot. These are sometimes flat stones, but very commonly rounded, in either case tapering towards the bottom, while a turban or cap or other head-dress is carved on the top of the head-stone, to indicate the rank or class of the deceased. Such a grave is figured in Mr. Lane's "Modern Egyptians," p. 524. On the meaner tombs the upright stones are smaller, often roughly formed and almost shapeless; and are so far from looking like head and foot stones that inquiry was prompted as to their meaning. I was told that they represented the good and bad angels of the deceased. Probably the reference was to the two angels, *Munkar* and *Nakeer*, who are supposed to visit the dead person on the night following his burial, and examine him concerning his soundness in the faith.

Some weeks after being in Cairo I was with a party making the journey from Damascus to Baalbec. We rested for lunch at the fountain of Fijeh, where the main water of the Barada comes boiling out from a cave and forms at once a considerable torrent. The cave is surmounted and surrounded by Cyclopean masonry, which appears to be the remains of a temple, of unknown date and significance, but anterior to Roman or Greek. The interest of these remains may have diverted attention from other things in the neighbourhood, and I cannot find that Murray or Baedeker, or such a traveller as Dr. Tristram, have a word to say about the curious graves in the village. Throughout this stony district the graves are raised mounds, looking as though the body were placed, not *in* the ground but upon the surface, to save the trouble of excavation. But the graves at El Fijeh have the form of broad flat-bottomed boats. About a day's journey beyond this place, at the hamlet of 'Ain Hawar, I found the graves in the little cemetery still more remarkable in shape, for they are like long Egyptian boats carrying an ark of the dead, and ornamented with the sacred tree. Two-and-a-half hours further on, in the burial ground of the village of Yafufeh, the graves are of simpler form, being built in three tiers, in the fashion of a step pyramid; and here my note, made on the spot, records my impression that while the upper tier *may* probably be representative of the ark, the head and foot-stones are almost certainly the conventional reproduction of the head and stern of the boat.

What first led these people in the Anti-Lebanon mountains to build their graves on the model of a boat? Captain Conder, in his "Syrian Stone Lore," reminds us that Sanchoniathon speaks of arks or ships borne in procession. He mentions also that the Phœnicians of Gebal used annually to observe a feast of floating papyrus arks on the river Adonis. A carnelian scarab found at Amrit, in Phœnicia, exhibits a ship with the sun above it, and letters which Perrot reads as Kheb, but which Conder would read Kber and regard as the Semitic spelling of Horus. Probably we must go to Egypt for the fullest light on this subject.

The ancient Egyptians carried a sacred boat in their funeral processions, and the ceremonies always included a voyage across a lake or across the Nile. Every large city, such as Thebes or Memphis, had its sacred lake, and there were lakes also for the Nomes or Departments. When the funeral procession arrived at the sacred lake, the coffin was placed on a *baris* or consecrated boat of the dead, such as is figured in Sir J. Gardner Wilkinson's "Ancient Egyptians." This was not because the lake lay in their way and must be crossed; for the funeral party appear to have returned by land, the distance round the side of the lake not being great. Nor was it a mere survival of ancient usage from the time when it had been necessary to cross the Nile to reach some burial ground on the other side. The carrying of a consecrated boat in the funeral procession was a practice which existed side by side with the actual crossing of the water when they came to it. The boat was symbolical; and the lake itself was symbolic, representing the water to be crossed by

the soul in the Underworld, in order to reach the abode of bliss. The boat of the sun descended into its nocturnal course at a cleft in the mountain near Abydos, and the soul of man would have to go the same way. There was a Lake Acherusia in the Lower World, midway between east and west we may suppose, and both the sun and the soul would have to cross it. This lake was localised near Memphis, in Egypt, and at several places in Greece.

The Greeks, we know, borrowed their religious system from Egypt ; and this portion of it was not left out. In the boat which was brought up to the lake side in the funeral ceremony in Egypt the boatman's name was Charon ; and both Charon and his boat were adopted by the Greeks for the conveyance of the shades of the dead across the River Styx in Hades.

On the side of a tomb at Pompeii is a curious bas-relief of a ship, the prow of which is of singular shape, and surmounted by a bust of Minerva. It has been maintained that it symbolises the arrival of the tossed ship of life in a quiet haven ; and in support of this opinion Breton adduces several instances of the allegorical introduction of a ship in funeral monuments.¹ In the *Ceramicon* at Athens—a cemetery which has been buried for centuries, like Herculaneum and Pompeii, and only recently dug out—I noticed a tomb on which Charon and his boat are sculptured, while survivors are taking leave of their departing friend. And in the cathedral at Athens, one of the most beautiful of the recent monuments has a boat carved upon it as its chief feature. Captain Conder also tells us that in February, 1882, he saw symbolic ships carried through the streets of Constantinople to be floated in the Bosphorus.

Considering all these facts, we can hardly doubt that the boat-shaped graves of Syria are symbolical of the soul's voyage in the Underworld, and are reproduced by traditional custom in perpetuation of a practice which appears to have originated with the ancient Egyptians. The like may be said for the old Scandinavian custom of burying the dead in boats ; it was doubtless connected with their belief in Odin's golden ship, which conveyed the souls of slain heroes to Valhalla.

A word finally about the head stones and foot stones of modern graves. In the consecrated boat of the Egyptians there stood behind the hearse the images of Isis and Nephthys, emblems of the Beginning and the End, who were thought to be always present at the head and feet of the dead who had led a virtuous life, and who were deemed worthy of admission into the regions of the blessed. These might afford a plausible origin for the two upright stones on a Mohammedan tomb ; but for those in Syria and elsewhere I am inclined to think that the prow and poop of a sacred boat of the dead are not unlikely to have formed the first models.

GEORGE ST. CLAIR.

¹ Dyer's Pompeii.

LYDDA AND ANTI-CHRIST.

CAPTAIN CONDER, in his Note on the Moslem tradition that Anti-Christ is destined to be slain by the true Messiah at the gate of Lydda, says nothing about the connection of Lydda with St. George and the Dragon. The Church of St. George, on the south side of the village, is the only interesting thing in Lydda at the present day. The tradition is that St. George was born at Lydda, suffered martyrdom in Nicomedia under Diocletian, near the close of the third century, and that his body was conveyed to his native town, where a church was erected in his honour. But this is not the true origin of the legend. The Eastern traveller meets with St. George and the Dragon in Damascus, Athens, and other places as well as in Lydda, and becomes aware that the legend has made a deep impression upon the Eastern mind. The truth is that the Christian Saint in this legend represents one mightier than himself; the St. George of the early Christians must have been Christ, and the dragon Anti-Christ. In this form the story had displaced a similar story in heathendom, as is so often the case. St. George and the Dragon = Christ and Anti-Christ = Apollo and the Python = Ormuzd and Ahriman = Osiris and Typhon = Merodach and Tiamat = the Deity of Light triumphing over the Demon of Darkness. The final conquest is to be at the Last Day.

The scene of the struggle was localised in many places. Why Lydda was selected as one of the places we do not know; but the scene was no doubt localised here before the advent of Christianity. Why did the Greek and Roman writers call Lydda by the name of Disopolis—the later name of Thebes in Egypt, and meaning City of Jove? I imagine it was because the legend of the divine struggle was known to be connected with the town. I believe I could find confirmation in the Hebrew name Lod (לוד), a breach, fissure, or cutting in the earth; but the argument does not lie upon the surface, and to pursue it would lead me too far.

GEO. ST. CLAIR.

THE EXODE.

NOTES on "A Journey to the Biblical Sites in Lower Egypt," &c., by Greville J. Clarke, B.A., *Palestine Quarterly*, July, 1880, p. 133.

I looked forward with keen interest to the perusal of this paper, the preparation of which was notified in the *Quarterly* some time ago, and, I must say, I was disappointed: a grand opportunity of establishing the Biblical narrative of the Exode has been thrown away, by travelling in an opposite direction to refute indirectly, and at the most lukewarmly, the extraordinary views advanced by Herr Brugsch.

Mr. Chester evidently believes in the Bible, and yet, in the face of its simple declarations, he cannot accept the southern route of the Israelitish host, "when they might have gone out straight and by a short cut into the desert by the well-known 'royal' route into Phœnicia;" this route would have necessitated contact with the warlike Philistines, and, therefore, was distinctly barred by the Divine leader. (Ex. xiii, 17, 18.) What can be simpler or more distinct than these words? (*Vide* also Jos., sec. xv.)

Again: Mr. Chester objects to the southern route because "the name Baal-zephon is clearly of Phœnician or Semitic origin, and to be looked for on the road to Syria, and not in a place so utterly remote from Phœnician influences as the desert Egyptian coast of the Red Sea."

Now, setting aside other proofs, I think I can show that "Phœnician influences" *were* at work even before the period of the Exodus. The proof is slender, but strongly suggestive. Let us turn to the book of Job, the oldest book in the world; its history is certainly antecedent to the Exode, the stirring events of which find no record in its pages. In His magnificent description of Leviathan, Jehovah inquires (xli, 6), "Shall the companions make a banquet of him? Shall they part him among the merchants?" The authorised version renders the Hebrew word *Kenanim* by "the merchants;" Delitzsch translates Canaanites,

"Do fishermen trade with him,
Do they divide him among the Canaanites?"

But the LXX render Kenanim by Φοινίκων ἔθνη, the nation of the Phœnicians. Now, as the south-eastern boundary of the land of Uz abutted on the Gulf of Elah, we may reasonably presume, especially bearing in mind the then mineral wealth of Midian, that the Phœnicians *were* well acquainted with the busy waters of the Sinus Ælaniticus, and that the port of Ezion-geber was already in existence.

It is not likely that the commercial enterprises of Solomon and Pharaoh Necho, with his Suez Canal, years after, were novelties, but merely expeditions along well-known tracts.

Therefore, if we allow a thus early acquaintance of the Phœnicians with the Gulf of Elah, the prominent headlands of Jebels Atakak and Abu Deráj at, and below Suez, must have been familiar to them.

To return to Mr. Chester's sites. Kantára, on the Suez Canal, is on the Great Háj road, a route which, from time immemorial, must have constituted the "descent into Egypt" from Palestine. Down it came Abram, and later, Jacob from Beersheba; and still later, the infant Jesus. Arrived there Jacob "sent Judah before him unto Joseph to direct his face unto Goschen" (Gen. xli, 28). Mr. Chester's identification of Tel Fakús with Goshen will suit very well, for it is only 30 miles west, and a little south of Kantára: duly directed, the patriarch repairs thither from Kantára, and then meets his long-lost son.

The "land of Goschen" must have been the headquarters of the immigrants, and from it, during the Servitude, the adult males would be drafted to their labours at Pithom and Rameses.

Mr. Chester, giving no latitude or longitude in his map, places Sau (Raameses) on the right bank of the Tanitic branch of the Nile, but does not tell us how the Israelites got over the eastern obstacle of the Pelusiac branch. Brugsch Bey places it east of the right bank of the Pelusiac branch, *i.e.*, in N. lat. $30^{\circ} 58'$, and E. long. $29^{\circ} 32'$.

Black's Atlas places Rameses in N. lat. $30^{\circ} 35'$ and E. long. $31^{\circ} 59'$, and this site I venture to adhere to as answering the requirements of the Sacred Narrative.

Thus much for the landmarks of the Servitude ; now for those of the Exode, which must be crucially tested by the Sacred Narrative. The starting points were undoubtedly Rameses and Pithom, and the rendezvous Succoth, on the road to Etham, by the then route from Egypt to Arabia.

Now, what or where was Succoth ? Certainly not an Egyptian *town*, but merely a collection of booths (succoth) marking the rendezvous of Israel prior to the first regular march of the host to Etham. Consequently, its site can only be conjectured, never determined ; it was only Succoth *quoad* Israel, and, when the host left, broken pottery, fire-places, and the *débris* of booths, perhaps all obliterated in the next inundation, would be all that marked the once busy Succoth.

As such the Egyptians never knew it, as such it was, and is fondly commemorated by the Israelites and Jews in the great "Feast of Succoth," booths, or tabernacles. We first meet with Succoth in Gen. xxxiii, 37. After parting from Esau "Jacob journeyed to Succoth." That the place had no previous existence is evident from the same verse for, arrived there, Jacob "made succoth (booths) for his cattle ; *therefore the name of the place is called Succoth.*" Then it was only Succoth *quoad* Jacob, afterwards the temporary became the builded Succoth of Judges (viii, 5).

Then Solomon runs up a Succoth in the plain of Jordan, near Zarthan, to shelter Miriam and his brass casters (1 Kings vii, 45.) Further, we meet the word in Job xxvii, 18, "as a booth *that* the keeper maketh ;" and lastly, we find the querulous Jonah making himself a succoth, and sitting "under it in the shadow" (iv, 5).

As well might we expect to find the site of his succoth as of that of the Israelitish host. In India the root of the word is well known. We have "sak-f," a roof or canopy ; sak-fi, a beam or rafter ; sak-in, a dwelling, an inhabitant.

But it may be urged against my view—the Israelites would never have been allowed to remain unmolested in a succoth rendezvous so close to Rameses. Why not ? During the uplifting and ringing of the "great cry in Egypt" (Ex. xii, 20), no one would attend to the Israelities, who were virtually out of sight, and, therefore, out of mind, and the long period devoted by the Egyptians to embalming and mourning (Gen. l, 3) must be fulfilled. The "haste" of Ex. xii, 11, does not apply to the departure from the Succoth, but to the hurry in reaching it from the various points of departure.

Therefore, there was ample time and opportunity for the hosts of Israel to organise themselves at the Succoth, and this accomplished, they made the first actual march to Etham, which was to lead them to the Mount of God. Where, then, was the Succoth? Probably equidistant from Pithom and Rameses; perhaps 6 to 8 miles distant from the latter and on the road to Etham. Where was this station? Any one acquainted with oriental marching knows that 10 to 12 miles constitute an ordinary march, while 12 to 16 are considered a long march. During the former, a regiment will halt once, and during the latter, twice.

Moreover, as this was to be the first real march of the host, and as there was no hurry, it would probably be an easy one of 10 to 12 miles from the Succoth, and 16 to 20 miles from Rameses. Therefore we may look for Etham "in the edge of the wilderness" (Ex. xiii, 20), 16 to 20 miles south or south-east of Rameses.

Arrived at Etham, there is a fresh organisation of the Israelitish host, prior to the move towards the Egyptian frontier post of Sarábet-el-Khádim, from whence would commence the "three days' journey into the desert," which would bring them to the Mount of God. Here they formed a properly marshalled host, and this required more time than at the Succoth, for their hurried movement only existed between this rendezvous and Rameses (Josephus, sec. xv). There is a general impression that the retreat from Rameses to the right shore of the Red Sea only occupied three days, but Josephus not only gives us a leading landmark by telling us that the host "took their journey by Letopolis, a place at that time deserted, but where Babylon¹ was built afterwards, when Cambyases laid Egypt waste" (sec. xv), but tells us further, "on the third day (*i.e.*, from Letopolis) they came to Baal-zephon, a place on the Red Sea."

Letopolis is the key of the Exode, and its position explains the after action of the Egyptians. Where was it?

The Junior Ancient Atlas (Stanford) places Babylon in lat. 30°, long. 31° 20', on the right bank of the Nile, between the end of the rugged range, which, commencing at Jabel-Ataka (overshadowing Suez), runs due west, and merges into the plain, a few miles from the Nile. Brugsch Bey places Letopolis on the left bank of the Nile, some way north in lat. 30° 12', and fair west in 28° 50' long. As for Babylon, he agrees with the Junior Ancient.

A few miles south of Babylon, and on the left bank of the Nile, stood Memphis. This great city guarded the apex of the triangular desert, still called, like that on the further side of the Red Sea, Et Tih, "the wandering." It was bounded on the north by the precipitous range running due east from Memphis to J. Ataka, and, on the south by a steep range running south-east from Memphis, and terminating at Jebel Abu Deráj; the base of the triangle, running south-west from J. Ataka, for about 28 miles, was the Red Sea. The length of the triangle east and west would be about 60 miles.

¹ 1 Peter v. 13.

Hark we back now to Etham, where we left the host of Israel preparing to enter the wilderness, on the left shore of the Red Sea, and with their right shoulders forward.

Suddenly their movement is arrested and reversed by the Divine command—"Speak unto the children of Israel that they turn and encamp before Pitahiroth, between Migdol and the sea, over against Baal-zephon" (Ex. xiv, 2). How the host must have been startled by this order, reversing their movements from expected liberty to re-impending bondage! But, at present, strong in faith, "they did so."

What does this reversal mean? Deploing my feeble knowledge of Hebrew, I can only fall back upon the LXX to help me, and what does it say?

Ἀάλησον τοῖς υἱοῖς Ἰσραὴλ, καὶ ἀποστρέψαντες στρατοπεδεύσάτωσαν ἀπέναντι τῆς ἐπαύλεως, ἀναμέσον Μαγδώλου καὶ ἀναμέσον τῆς θαλάσσης ἐξεναντίας Βεέλσεφών· ἐνώπιον αὐτῶν στρατοπεδεύσεις ἐπὶ τῆς θαλάσσης. Εξ., xiv, 2.

"Speak to the children (of) Israel, and turning back, let them encamp over against the last night-halt, towards middle of Magdolon and towards middle of the sea opposite Baal-zephon. In the presence of them you shall encamp upon the sea(shore)."

N.B. The rendering of the name Pe-ha-hi-roth by τῆς ἐπαύλεως is very remarkable, and points at a retrograde movement. Obeying the divine order, and turning to the right-about from Etham with left shoulders forward, the host skirts the northern base of J. Ataka, and reaches Letopolis; then pivoting on the left, with right shoulders forward, they enter the pass leading into the triangular Et Tih, or Wádi Mūsa desert, with the J. Ataka and Abu Deráj ranges frowning on them left and right. The divinely-ordained position is attained, "they are entangled in the land, the wilderness hath shut them in" (Ex. xiv, 3.) Let us refer to Josephus' graphic account of their condition: "Now when the Egyptians had overtaken the Hebrews, they prepared to fight them, and by their multitude, they drove them into a narrow place . . . they also seized upon the passages (the pass leading to or from Memphis and Letopolis) by which they imagined the Hebrews might fly, *shutting them up between inaccessible precipices and the sea*, for there was on each side a ridge of mountains that terminated at the sea, which was impassable by reason of their roughness, and obstructed their flight. Wherefore, they there pressed upon the Hebrews with their army *where (the ridges of) the mountains were closed with the sea*, which army they placed at the chops of the mountains that also they might deprive them of any passage into the plain," *i.e.*, back again, *viâ* Letopolis.

On steaming up the Red Sea, Suezwards, you pass close to this wonderful scene; on your left is the rugged and ruin-topped Jebel Abu Deráj, with its precipitous continuation running inland to the north-west; then you see the triangular Et Tih, or Wádi Mūsa, and, at its littoral centre, not far from the sea, rises a small conical hill, on which, you can easily understand, stood Moses on that ever-memorable night

with the rod of God in his hand, and directing calmly (Ex. xiv, 13) the panic-stricken Israelitish hosts.

There he stands, undismayed at the mighty convulsion he is witnessing, barely able to resist the fierceness of that blast from the east which is cleaving through the affrighted waters of the sea, which huddle together to the north and south anxious to escape its irresistible driving and smiting. Probably, among the other notables of the host, Aaron and Huz are with him, as, afterwards, at the battlefield of Rephidim.

Passing this cone we reach the rampart of Jebel Ataka, frowning over Suez, and running due west to meet the twin range of J. Abu Deráj.

Below, on each side of and behind the cone, are the dismayed but confident hosts of Israel marshalling themselves to cross the sea in line. Behind them, killing the radiance of the paschal moon, towers the blaze on one side and midnight gloom on the other, of the mysterious Shekinah, which up to the present had led the van of Israel. Beyond all are the hosts of Memphis marshalling themselves, as best they can, in the miraculous gloom which envelopes them.

What had they done? As long as the Israelites were moving Ethamwards, they were presumed to be carrying out their "three days' journey into the wilderness," but when the retrograde move occurred, the cry was raised that the people fled, and the chivalry of Memphis, led by the Pharaoh in person, poured out eastward in pursuit, entered the pass, and entirely prevented any backward retreat. Thus the Israelites are in a hopeless trap, the Red Sea in front, the mountain barriers on either side, and the Egyptians behind.

Sore distressed they "cried out unto the Lord," whose enigmatical order followed that they were to go forward, even though the sea was ahead of them, boatless then as now.

Let us now try and recover the historic sites connected with the sacred narrative, Pi-ha-hi-roth, Migdol, and Baal-zephon, and trusting to the valuable assistance of the Rev. Charles Forster's work, "Israel in the Wilderness."

Pihahiroth.—We have seen that the LXX translate the name by $\tau\eta\varsigma \epsilon\pi\alpha\upsilon\lambda\epsilon\omega\varsigma$, "the last-night halt," and this may be the consistent meaning. Forster, quoting from Bruce's "Itinerary," translates the word as "mouth of the valley" opening to the flat country and the sea, and corresponding to the Arabic word Fūm. Pihahiroth may then be the pass opposite Memphis, leading, after passing Letopolis, into the triangular desert Et Tih, or Wádi Mūsa.

Migdol (watch-tower) would be on Jebel Ataka at the north-east corner of Wádi Mūsa (Et Tih), overlooking it, and the Wells of Moses (Ain Mūsa) on the opposite side of the sea.

Baal-zephon (God of the watch-tower) would be Jebel Abu Deráj, at the south-east corner of the Et Tih (Wádi Mūsa) overlooking the ancient Clyoma, the Arabic Qolzūm, which still gives the Arabic name to the sea between Jebels Abu Deráj and Ataka, Bahr Qolzūm, or "sea of the

swallowing up." Eusebius identifies the name and locality--'Βεελσεφών, πρὸς τῇ ἐρέμῳ σταθμὸς τῶν υἱῶν Ἰσραὴλ ἐξιόντων ἐξ Αἰγύπτου διὰ τοῦ Κλύσματος, παρὰ τῇν θάλασσαν.

This, then, is the position we have arrived at, and it was probably thus reached: on the first of the three days of Josephus, the host, leaving Letopolis on their right, would move round the western and final spur of J. Ataka and enter the Wádi Mūsa or Et Tih desert. The day previous they had been "before Pi-ha-hi-roth," the mouth of the valley, now it was behind them. Memphis would be 18 miles, a little north of due west behind their first camp in the Wádi. During their second march the Egyptian array from Memphis, pressing upon their rear, might be behind them, and under this pressure they would hurry their movements; and on the third march they would rest with their right flank under J. Abu Deráj (Baal-zephon), their left under the Migdol-topped J. Ataka, the Egyptians behind, and the Red Sea in front.

Thus the divinely-ordained and apparently hopeless position has been obtained. No wonder, then, that the Israelites were "sore afraid, and cried out unto the Lord." Moses tries his best to cheer them (Ex. xv, 13, 14) but he too inwardly shares their fears, and betakes himself to cries for succour. "Wherefore criest thou unto Me?" (τί βοᾷς πρὸς μέ; "why shoutest thou towards Me?" LXX) is the gentle remonstrance of Jehovah, and then comes the amazing order—"Lift thou up thy rod,¹ and stretch out thine hand over the sea, and divide it" (ῥῆξον αὐτήν, LXX, "break through its line of battle"), "and the children of Israel shall go on dry ground" (κατὰ τὸ ξηρόν, LXX, "over the dry") "through the midst of the sea."

This secures their deliverance, which is to be further brightened by the annihilation of their oppressors.

Arrived thus far, let us understand the steps that Israel had to take in securing deliverance, encamped as they were along the sinuous shore of the Red Sea, constituting the base of the triangular Wádi Mūsa.

They occupied a shore line of about 25 miles between Jebels Ataka and Abu Deráj, and their numbers were "about six hundred thousand on foot *that were* men, beside children. And a mixed multitude (camp followers) went up also with them; and flocks and herds, *even* very much cattle" (Ex. xii, 37, 38). Can the 600,000 males have crossed over in line.

In the field exercises of the Army the allowance for each man is 2 feet, therefore the prodigious line would have extended 1,200,000 feet; that is over 227 miles, 5,280 feet constituting a mile. The coast line being

¹ NOTE.—This was the "rod of God" (Ex. iv, 20), the pastoral staff of Moses, which commencing his and its career of miracle at the burning bush (Ex. iv, 2), accompanied the outbreak of faithless passion (Num. xx, 12) which barred the entrance of Moses into the land of promise, and doubtless, accompanied him to his death on Pisgah's summit; and this was the rod which figuratively comforted the shepherd David (Ps. xxiii, 4).

only about 25 miles in length, crossing in a single line would have been impossible, as also in a double line (of 300,000 men), which would have required 113·5 miles.

But would 25 miles of coast line admit of? They equal 132,000 feet, which divided by 2 (the regulation breadth of a man) would allow of a line of 66,000 men, an army in itself; nine of these lines would contain 594,000 individuals, and 6,000 would be available for baggage, cattle, and camp-follower guards.

For the disposal of this immense force we might imagine the following arrangement :—

	Van.		
Say 4 yards.	<hr/>		
	<hr/>		
	<hr/>		
	<hr/>		
Say 500 yards.	Camp followers.		
	Guard.	Cattle.	Guard.=6,000.
	Baggage.		
Say 3 yards.	<hr/>		
	<hr/>		
	<hr/>		
	<hr/>		
	Rear.		<hr/> 600,000. <hr/>

What was the width of the sea before them, and, under the extraordinary circumstances, at what rate could they cross it? About 25 miles at its widest part; and, marching quick time, they could do 3 miles 720 yards in an hour. Impeded by the cattle and waggons—say they marched $2\frac{1}{2}$ miles per hour—then they could easily have effected the passage in, say, 10 hours.

Let us now revert to the proceedings of that wonderful day the evening of which was to witness the commencement of the salvation of Israel and the utter annihilation of the Egyptian host.

The outbreak of faithless alarm on finding the Egyptians behind them and cutting off their retreat had subsided, and leaving the protection of their rear to agencies divine, they commence marshalling their

hosts for the miraculous passage before them, and perhaps then, as afterwards (Num. ii, 31), the rear guard was assigned to the tribe of Dan.

The "strong east wind" (Ex. xiv, 21) raised by the uplifted rod of Moses has commenced to cleave the frightened sea, and, more ominous still, the pillar of cloud intervenes between the Israelites and Egyptians, involving the latter in its murky and impenetrable gloom.

Well might it have been for them if they had then raised the cry wrung from them afterwards when too late—"Let us flee from the face of Israel, for the Lord fighteth for them against the Egyptians" (Ex. xiv, 25).

All day long the marshalling of the hosts of Israel has been going on under the blast of the east wind, and as the sun sets over Pi-ha-hi-roth the miraculous pathway across the sea lies ready for use.

Natural darkness is setting in and the pascal moon is on the wane, but the hosts of the Lord are in the full blaze of the miraculous light shed by the mysterious pillar behind them. Suddenly the advance sounds, and the enormous lines of Israel move down the sea-weed slope of the exposed Red Sea bed.

The scene is graphically described in the apocryphal Book of Wisdom, xix, 7-9 :—

"A cloud overshadowing the camp,
And where water stood before dry land appeared,
And out of the Red Sea a way without impediments ;
And out of the violent stream a green plain,
Where through all the people went that were defended
with Thy hand,
Seeing Thy marvellous strange wonders,
For they went at large like horses,
And leaped like lambs ;
Praising Thee, O Lord, who hadst delivered them."

But what of the Egyptians? The sea having been cut through, the roar of the east wind would have subsided, and then they would miss the busy hum of the Israelitish host, and groping about in the gloom of the pillar would find the lately crowded sea-shore quite deserted.

Raising the alarm, "the Egyptians pursued and went in after them into the midst¹ of the sea, even all Pharaoh's horses, his chariots and horsemen." Josephus (§ xv) gives us the details of the host—"600 chariots, with 50,000 horsemen and 200,000 footmen, all armed."

As rapidity in pursuit was desirable, the latter was left behind in camp, for the Divine Record (Ex. xiv, 23) states that the pursuing army consisted of "all Pharaoh's horses, his chariots, and his horsemen." Josephus further tells us "they put their horse foremost."

But the pursuit is futile, a hopeless forward groping in the awful

¹ *i.e.* About twelve miles.

gloom of the pillar, and now it is to be still further hampered and impeded—

“And it came to pass that in the morning watch the Lord looked unto the host of the Egyptians through the pillar of fire and of the cloud, and troubled the host of the Egyptians,

“And took off their chariot wheels, that they drave them heavily, so that the Egyptians said, Let us flee from the face of Israel, for the Lord fighteth for them against the Egyptians” (Ex. xiv, 24-5).

The Egyptians, seeing the hopelessness of their case, meditate retreat, but cannot effect it.

What was “the morning watch,” *ἐν τῇ φυλακῇ τῇ ἰωθινῇ*? The Jews reckoned three watches—the first, or beginning of the watches (Lam. ii, 19), the middle watch (Ju. vii, 14), and the morning watch (Ex. xxiv, 4, 1 Sam. xi, 11). These would last, respectively, from sunset to 10 p.m., from 10 p.m. to 2 a.m., and from 2 a.m. to sunrise.”—Smith’s “Dictionary.”

Therefore, *after 2 a.m.* on that fatal morning, divine retribution began. The Israelites would now be nearing the eastern shore of the Red Sea, having started in the first watch, as darkness fell, say between 7 and 8 p.m.

The Bible tells us that the troubling of the Egyptians consisted partly in disabling their chariots. Josephus (sec. xvi) gives us more fully the awful results of the Lord looking “unto the host of the Egyptians through the pillar of fire and the cloud” (Ex. xiv, 24).

As soon as the last unit of the Israelitish host had reached the eastern shore the east wind ceased, and then the recoil of the sea walls began from the west, and all retreat was cut off; rapidly they re-united, and the Egyptian host was engulfed.

We can never grasp the horrors of that scene initiated by the troubling of Jehovah. “As soon therefore” (writes Josephus), “as ever the whole Egyptian army was in it the sea flowed to its own place, and came down with a torrent raised by storms of wind and encompassed the Egyptians. Showers of rain also came down from the sky, and dreadful thunders and lightning with flashes of fire.

“Thunder-bolts were also darted upon them; nor was there anything which used to be sent by God upon men as indications of His wrath, which did not happen at this time, for a dark and dismal night oppressed them.”

The destruction complete, the war of elements would subside, and an awful silence would rest upon the frightened sea, broken only by

“The last expiring cry,
Of some strong swimmer in his agony.”

Then all was still upon the sea.

Away, on its eastern shore, is the hum of the rescued host, and as daylight shows them the corpses of their late foes, thrown up on the eastern shore by the returned sea, led by Moses, they raise the triumphant

song of praise and thanksgiving which, in future ages, is to accompany that of the Lamb as the pæan of the ransomed and spiritual Israel of God.

One word more. The following memorials of the crossing still remain on the eastern shore of the Red Sea :—Opposite I. Ataka are the Ain Musa (wells of Moses) ; Wádi Raenána, the “Valley of the People ;” Wádi Kurkiyeh, the “Valley of the Congregation ;” Wádi el Ahtha, the “Valley of the Pilgrims ;” Wádi Sadr, the “Valley of the Returned from the Water ;” Wádi Wardán, the “Valley of the Descending into the Water ;” while, as I have already shown, the sea between Jebels Ataka and Abu Deráj is still called by the Arabs Bahr Qolzām, “the Sea of the Swallowing up.”

Note.—Let us attempt the chronology of the marvellous events we have been attempting to describe.

Presuming that the Exode occurred B.C. 1491, the departure from Rameses took place on the 14th of April (Nisán or Xanthicus), the moon being at the full ; allowing, say, three days’ halt at the Succoth, they would remain there until April 17th, and march to Etham on the 18th. The third, fourth, and fifth marches (19th to 21st April) are unknown ; the 6th brought them to Letopolis (22nd), and the 7th (23rd) “before Pe-ha-hi-roth,” and the pass leading into Et Tih (Wádi Māsa).

On the 8th March (April 24th) they were well into the rampart-walled Wádi, with the Egyptians behind them, and cutting off their backward retreat ; on the 9th (April 25th) they were further advanced into the Wádi. On the 10th March (April 26th) they were three days from Letopolis ; the sea in full view, their left flank under Jebel Ataka, Migdol, and their right under J. Abu Deráj, Baal-zephon.

On the 11th (April 27th) they might marshal on the west shore of the Red Sea, and at, say 8 p.m., of that day (27th), they commenced the crossing, and reached the eastern shore, say at 6 a.m. of the 12th March (April 28th).

Having to meet their doom after 2 a.m. of the 12th day, April 28th, in mid-sea, and being able to march as cavalry only, say at 3 miles per hour, the Egyptians might do the 12 miles to mid-sea in 4 hours, and so starting at 10 p.m., April 27th, might reach the fatal spot at 2 a.m., April 28th.

Then began the Divine hampering which terminated in their total overthrow at, say, 3 a.m. on the morning of April 28th, B.C. 1419.

N.B. I have not included Sabbath halts, under the strong presumption that the rigid observance of the seventh day was not enforced until they reached the Mount of God.

ITINERARY OF THE EXODE.

Marches.

1. To Succoth.
2. Etham, route reversed.
3. Unknown.
4. Unknown.
5. Unknown.
6. Letopolis.
7. "Before Pe-ha-hi-roth."
8. In Wádi-Mūsa, Egyptians behind.
9. Wádi Mousa.
10. Three days from Letopolis, Migdol on left, Baal-zephon on right.
11. Crossing Red Sea from 8 p.m. to 6 a.m. of next day, April 28th, B.C. 1491.

R. F. HUTCHINSON, M.D.

THE "CITY OF DAVID" NOT THE SAME AS THE
"CITY (JERUSALEM) OF DAVID'S TIME."

It was only the hope that a much abler pen than mine would take up the subject, that led me to abstain from commenting immediately on the extraordinary statements of Captain Conder on pages 105 and 106.

If one disputant does not read what has been said on the other side (and in *Quarterly Statement*, 1885, p. 228, Captain Conder avows that he had not then had the opportunity of doing so), or having read, neither acknowledges his own mistakes nor takes the trouble to point out to others the flaws in their arguments, and the errors in their statements of fact, it cannot be wondered at that "fifteen years of controversy" may have no result, but that "the disputants retain their opinions" (p. 105).

If Captain Conder had since August, 1885, read the papers in the January number of that year's *Quarterly Statement*, pages 57, 58, 61-5, it seems almost insulting to suppose that he would have written as he now has.

He must certainly have forgotten to refer to his own printed statements, when he says (p. 105), "I never claimed that the 'City of David' was a term equivalent to Jerusalem generally, but only that it meant—as one would naturally suppose—the City of David's time." What then does Captain Conder mean by the *City of David's time*, unless it is "*Jerusalem*."

References in my former paper (*Quarterly Statement*, 1885, p. 57) show that it was implied that the "capital of Syria"—the "capital of David's kingdom"—a "capital like Jerusalem," was meant by the name "City of David."

Again, *Quarterly Statement*, 1885, p. 229, we have the words, "I hold Zion to be the poetical name of Jerusalem."

"If Zion then be = Jerusalem, Jerusalem is = the "City of David," for "The City of David—is Zion" (1 Kings, viii, 1). Taking the latest statement, however, that the "City of David" is not a term equivalent to Jerusalem generally, and yet was the "City of David's time," how can it be shown that there is any difference between the two?

I can see none, unless by "Jerusalem generally" Captain Conder means Jerusalem at its largest extent, at a subsequent *time*.

Of course the *Jerusalem* of Herod was not the same as the *Jerusalem* of Hezekiah, or of Solomon, but our contention is, and Scripture clearly proves it, that the "City of David" was *not* the same in *David's time* as the City of Jerusalem as ruled over by the *same* monarch.

Much less was the "City of David" of Hezekiah's time of the same extent as Hezekiah's City of Jerusalem.

The "City of David" was the "stronghold of Zion" which David captured from the Jebusites, and the passages which tell us this, tell us also that David "built round about it," and it can hardly be maintained that he could do this, without the resulting Jerusalem of his time (made up of the former Jebusite city and his own additions) being *larger* than the contained fort or stronghold, which was the "City of David."

As to making a "distinction between the various books of the Bible in treating this question" when there is no *reason* brought forward for supposing that the words "City of David" are not "always used with the same meaning," seems a curious proposition from one who is the defender of orthodox views against the school of Welhausen.

If, however, Captain Conder is willing to accept the Books of Kings as authoritative, he will find that in his last paragraph, on p. 105, he has actually given up the whole case.

For the "field of the burial of the kings," which is allowed to have been on Ophel, *was actually part of the City of David*, seeing that Azariah, who was laid to his rest in that "field," was, according to 2 Kings, xv, 7, buried in "the city of David." Joram (2 Kings, viii, 24), Joash (2 Kings xii, 20, 21), and Ahaz (2 Kings, xvi, 20), were all alike buried in the "City of David," though they were *not* (according to Chronicles) interred in the *Sepulchres of the Kings*. Can it be that Chronicles is wrong, and that they were after all buried in the same set of tombs as David and Solomon?

Whatever Captain Conder may think, I believe your readers generally will, after perusing page 26, &c., of *Quarterly Statement*, 1886, see clearly that Millo, which was Akra, was actually, *teste* Josephus, on the modern Ophel, south of the Temple.

I acknowledge I ought not to have said that Manasseh built a wall *round* the City of David, but inasmuch as his wall was *outside* the City of David, and *yet* was westwards of Gihon in the Nachal (the Virgin's Fountain in the Kedron), it seems inevitably to follow that the City of David was on the hill west of Gihon, that is on the modern Ophel.

Whose theory it may be that placed "David's capital" on Ophel I don't know, the Rev. W. F. Birch does not. That it should be any

difficulty to find room on Ophel for "Zion, Millo, Ophel, City of David, and Akra," is only the difficulty of children who do not recognise that in the nursery rhyme—

Elizabeth, Betsy, Bessy and Bess
Went over the river to take a bird's nest,

the four names apply to one person.

Similarly it has been shown over and over again that the names quoted above all apply to the "City of David."

It is amusing to see that I am credited with *admitting* that "David's capital" was not "only a little village on Ophel," when it has been my sole aim in this controversy to show that *the part*, which was on Ophel, viz., the "City of David," was not as great as the *whole* of Jerusalem, the "capital of David's time."

I will not now occupy space with the "ancient nomenclature" of the "rest of the site of Jerusalem," but will only ask your readers generally, and Captain Conder in particular, to read the Scriptural evidence adduced in the January and April *Quarterly Statements* of 1885, and point out the errors, if that evidence does not show that David's capital (Jerusalem) was of greater extent than his fortified palace the "City of David."

H. B. S. W.

September 6th, 1887.

REPORT—EXECUTIVE COMMITTEE.

THE following is the Report of the Executive Committee, read and adopted at the meeting of the General Committee, June 14th, 1887.

MY LORDS AND GENTLEMEN,—

Your Committee elected at the last General Meeting, on July 26th, 1886, have, on resigning their office into your hands, to render an account of their administration during the past year.

1. The Committee have held seventeen meetings during the year.

2. The work of exploration has been carried on during the last year by Herr Schick at Jerusalem and by Herr Schumacher in other parts of the country. The portion of country recently surveyed by Herr Schumacher in Ajlûn consists of 500 square miles, containing a vast number of ancient sites and monuments. The map and memoirs arrived in England in January last; the memoirs contain sketches, plans, and drawings of all the most important places.

Some time before this survey Herr Schumacher executed for the German Society, having the same object as ourselves, a map of a large portion of the Jaulan. This was originally published in the "*Zeit-*

schrift," or journal of the German Society. It has now been translated, and will be published by ourselves, with the full permission of the Directors of that Society. It is illustrated by upwards of 300 drawings and plans.

Herr Schumacher has also, during the last twelve months, surveyed a portion of the country south of our own map, covering an extent of country of twenty-six miles along the coast, with an average breadth of five miles. The map includes fifty-three sites, villages, and ruins, against six as shown in the latest map of the same country. The memoir of this journey was published, with the map and forty drawings, in the *Quarterly Statement* of October last.

Herr Schumacher has further communicated to the Society many valuable archæological discoveries made by himself in the plain north of Cæsarea and in the vicinity of Tiberias. At the latter place he had the good fortune to discover the Acropolis of Tiberias, and was able to demonstrate the actual extent of the ancient city. The old wall, which he was able to trace its entire length, is, including that of the Acropolis, no less than three English miles—in other words, he has recovered the ancient extent and proved the ancient magnificence of the city, which, according to the theories of Robinson and others, had been crammed into the narrow space now occupied by the modern town.

Herr Schumacher has also, at the request of the Committee, visited and made a survey of the very interesting and little-known site of Pella, the refuge of the Early Christians on the outbreak of the troubles in Jerusalem. His memoir on this subject has not yet arrived, but it is expected to reach us before the end of the year.

Meantime, we have not neglected what remains undoubtedly the central interest in the Holy Land—namely, the researches in Jerusalem itself.

Among the discoveries made and followed up during the last year in Jerusalem itself are the second aqueduct, running side by side with the well-known aqueduct of Siloam; the positions of the second wall in Herr Schick's researches have proved of negative value; the discovery of what he believes to be the Amphitheatre of Herod, and the examination of various points, and full particulars of all these points, are published as they arrive in the *Quarterly Statement*.

We have to thank Mr. Lawrence Oliphant for the constant watchfulness which he is good enough to exercise on behalf of the Society from his residence at Haifa, for the many papers and letters he has written to us during the past year, and for the discoveries which he constantly communicates to us.

We have to thank Mr. Guy le Strange for the paper on the notices on the Dome of the Rock and the Church of the Holy Sepulchre before the Crusades. This valuable contribution to the subject shows that, from the year 874 A.D.—that is to say, 200 years after the alleged building of the Dome by the Arabs—there has been a continuous chain of evidence as to the Dome itself and the Church of the Holy Sepulchre, with a complete

agreement as to the origin and the architect of the first building and the existence of second.

We have also to thank the Rev. H. G. Tomkins, one of the members of the General Committee, for a paper which considers the site of Gath from a point of view quite novel, and opening up a new field of argument and investigation. Our old friend M. Clermont-Ganneau still continues to send us papers marked with scholarly research and learning. Captain Conder, we are happy to say, seldom allows a number of the *Quarterly Statement* to be issued without one or more valuable contributions from himself. We are glad to learn that this officer is likely to remain some time in England, having been appointed to the Ordnance Survey. During the last two months Captain Conder has published his researches in the Hittite Inscriptions. In placing this among their other volumes the Committee do not express any opinion at all as to the soundness of Captain Conder's conclusions. These have been attacked with great vigour, and it remains with Captain Conder to answer the objections raised to his theory.

The members of the Committee, and all the friends of the Palestine Exploration Fund, can only express their earnest hope that the reading of these inscriptions, which have now been under consideration for thirteen years, should be successfully accomplished by the officer who has done so much for the Society.

It is some time since the world was startled by the report of a great discovery of tombs and sarcophagi in the neighbourhood of Sidon. Many attempts were made on the spot to inspect and to figure these monuments.

The Turkish authorities, however, forbade permission to anyone to visit them, and the Director of the Constantinople Museum, Hamdi Bey, proceeded himself to Sidon in a Turkish man-of-war, in order to secure the things for the Imperial Museum. We have the pleasure of announcing that Hamdi Bey has ordered the presence of Herr Schumacher at Sidon in order to consult and to take measures for the removal and embarkation of the sarcophagi. We hope, by permission of Hamdi Bey, to procure for this Society plans, drawings, figures, measurements, and the description of these objects, which are described as being the finest sarcophagi in the world.

The Questions drawn up by the Committee appointed for the purpose of making an inquiry into the manners and customs of the various peoples and tribes in Syria are finished, and the last are now completed and printed, and have been sent to Syria.

"The Memoir of Twenty-one Years' Work" was published by the Society last year and presented to every subscriber who chose to ask for it; over 1,000 copies were thus distributed, with very happy results of maintaining the interest felt in the Society's work. Two thousand copies were sold by the publishers. The balance-sheet for the year 1886 is as follows :—

BALANCE SHEET, 1886.

RECEIPTS.					EXPENDITURE.				
Jan. 1. Balance in hand	£331	1	1		Management	£641	5	0	
Dec. 31. By Subscrip-					Exploration	496	16	2	
tions and Donations ..	1,795	10	4		Maps and Memoirs ..	768	3	5	
Maps and Memoirs ..	369	16	1		Printers, Binders, and				
Books	139	1	2		Engravers	414	15	2	
Photographs	8	2	1		Balance Dec. 31 ..	322	11	0	
	£2,643	10	9			£2,643	10	9	

At the end of the year there was a very large sum due to printers and engravers ; this debt has been reduced to a more satisfactory level by the payment under this head of £714. Since the beginning of the year £150 has also been paid in diminution of the loan of £850 due by the Society. It must be remembered that the printer's bill is not a question of management so-called ; it is one of vital importance to the very existence of the Society, which exists not only to collect information, but also to publish it. It has, therefore, been considered desirable that we should endeavour to make our *Quarterly Statement* fuller with contents and more attractive to our readers. With this object we propose to present Herr Schumacher's work, and perhaps the hitherto unpublished works of Conder, Ganneau, and H. C. Hart, published with the *Quarterly Statement*, and printed in such a form and type that they may be detached or bound up in separate volumes, if subscribers please.

In conclusion, we have to assure the General Committee and our subscribers generally that all the steps necessary to ensure continuation of the work on its present lines have been taken—that is to say, no opportunity will be lost of making researches and following up discoveries in the Holy City, and every possible agency will be brought to bear in the prosecution of research in the Holy Land itself and the countries which surround it.

We have to express our best thanks to the local Hon. Secretaries, and to all who have helped to extend the knowledge of our existence and aims, and even claims, to larger and more general support. The income of the Society is by no means equal to the demands upon it, and while we are continually paying off the liabilities caused by the printing of results, more reports continually arrive which also call for immediate publication.

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NAMES OF THE AUTHORS AND OF THE PAPERS CONTRIBUTED BY THEM.

	PAGE
Abbot Daniel, Pilgrimage of the	35
Bey Hamdi, Royal Necropolis at Sidon	9
Birch, Rev. W. F.—	
City of David	44
City of David and Acra.. .. .	108
Notes on Zion. Reply to Major Conder	42
Chaplin, Dr. T. Site of Ebenezer	263
Chester, J. Greville. Notes on a Journey from Iskanderân to Tripoli	65
Conder, Major C. R.—	
Altaic Cylinders	238
Pool of Bethesda, from the early Pilgrims	131
Calvary, Notes on	165
Chinese and Hittites	246
Comparisons of Hieroglyphics	252
Crocodiles in the Nahr ez Zerka	166
Ebenezer, Note on	265
Hittite Language	77
Hittite Monuments	150
Kirjath Jearim (Correction)	259
Marash Lion	41
Neby Dhahy, Note on	166
Notes on the Quarterly Statement	39
Racial Types, Early, Notes on the Places	160
Speech of Lycaonia	250
Ten Tribes, The	144
Druitt, Rev. Charles. The "Via Maris"	166
Errata	108
Glaisher, James, F.R.S. Meteorological Observations taken at Sarona, near Jaffa, 1880, 1881	167, 237
Lewis, Prof. T. Hayter. Sidon Sarcophagi	5
Meeting of the General Committee	282
Merrill, Selah. Line of Second Wall.. .. .	63
Notes and News	1, 53, 111, 171
Oliphant, Laurence. Notes on the Way to the "Place of Burning"	106
Post, Dr. George E. Flora and Fauna of Moab, Gilead, and the Haurân	175-237
St. Clair, George—	
Boat-shaped Graves	107
Kirjath-Sepher.. .. .	281
Nehemiah's Night Ride.. .. .	46
Nehemiah's Wall and the Royal Sepulchres	288
Sepulchres of the Kings	48
The Samaritans	50

Schick, Herr Conrad—	PAGE
The Byzantine Pavement near the Church of the Holy Sepulchre .	17
The Ancient Market Place	20
New Excavations in Jerusalem.. .. .	57
Pool of Bethesda	115
Line of the Second Wall	15, 62
Statue found at Askalon	22
Schumacher, Herr—	
Recent Discoveries at Lejjan, Haifa, Kefr Kenna, Mâ-mâs, Tiberias, Shefa 'Amr, Athlit, Surafaud, and the Haurân	103
Recent Discoveries at Cæsarea, Umm el Jemal, and Haifa.. ..	134
Simpson, William—	
Centre of the World	260
Conduit near the Pool of Bethesda	259
Strange, Guy le—	
Antioch in 1051 A.D.	266
Cave of the Sleepers	271
Idrisi's description of Jerusalem in 1154	31
Inscription in the Aksâ Mosque	278
Palestine according to the Arab Geographers and Travellers ..	23
Wilson, Col. Sir Charles W.—	
Note on the Excavations in Jerusalem	61
Pool of Bethesda, from the "Bordeaux Pilgrim"	124
Transference of the Arab Names of the Gates	141

LIST OF ILLUSTRATIONS.

	PAGE
'Acca, Inscription found at	140
Askalon, Statue found at	22
Beisan, Mask of a Head found at.. .. .	141
Bethesda, Pool of. Plan showing the Position of the two Pools ..	115
" " Sections of ditto	118
" " Plans of the Church, the Chambers, the two Pools, and Section of a Doorway	123
" " Proposed Restoration of the Porticoes and Pools of Siloam and Bethesda	127-129
" " Sketch Plan showing Position of Pools north of Haram Area	130
Cæsarea, Restoration of	135
" Section and Sketches of the Masonry, and Greek Inscription	136-138
Conduit near the Sealed Fountain	260
Dove-Cot, Rock-hewn	193
Haifa, Marble Capital found at	139
Hieroglyphic, Comparison of Plates, I, II, III, IV	252-257
Hittite Seals	243, 244
Hittite Language. Weak Roots	91
" " Strong Roots	97
Inscription, Greek	107, 202
Jerusalem. Plan of the Old Byzantine Market	18
" Plan and Sections of the Ground east of the Church of the Holy Sepulchre	60
" Plan of new Building near Jaffa Gate, showing line of Second Wall	64
Kefr Kenna, Ornamented Stone	104
Kuleib, Jebel, View of	204
Lejjun, Greek Inscription found at	103
Meteorological Observations, Table of, 1880	167
" " " 1881	237
Nebo, Mount, View from	187
" " from the Shittim Plain	182
Route of the Exodus. Map	110
Sidon, Rock-hewn Sepulchre at. (Plans and sections)	10-12
Turanian Types	164
Vase, The. Centre of the World	261

GENERAL INDEX.

- Abbot Daniel, Pilgrimage of the, 35.
 Abillin, Tombs, 141.
 'Acca, Inscription found at, 140.
 Aceldama, Field of, 34.
 Ælia, Main Street, 61.
 Agreement with Arabs, 177.
 'Ain Jenneh, 199.
 'Ain Hesban, 191.
 'Ain Selwân (Spring of Siloam), 34.
 el 'Al (Elealeh), 190.
 Altaie Cylinders, 239.
 'Ammân (Rabbath Ammon), 194.
 Antioch, 67.
 Antioch in 1051, A.D., 266.
 Antioch, Lake of, 66.
 Ancient Cemeteries, 76.
 Ancient Fort near the "Place of
 Burning," 106.
 Ancient Market Place, 19, 57.
 Aqueduct near Jeremiah's Grotto,
 20.
 Arab Robbers, Bands of, 201.
 Arab Names of the Gates, Transfer-
 ence of, 141.
 'Arâk el Emîr, 192.
 Aṛiha (the City of Jericho), 34.
 Arrow-head, Flint, 106.
 Athlit, 105.
 'Atîl, Village of, 206.
 'Ayûn Musa, from the Ghôr, 182.
 Baal-Meon, 187.
 Baal-Zephon, 40.
 Bâb 'Amûd al Ghurab (the Gate of
 the Crow's Pillar), 31.
 Bâb al Asbât (the Gate of the
 Tribes), 33.
 Bâb al Mihrab (Jaffa Gate), 31.
 Bâb ar Rahmah (the Gate of Mercy),
 31, 33.
 Bâb as Salubiyyah (the Gate of the
 Crucifixion), 32.
 Bâb Santa Maria, 31.
 Bâb Sihyûn (Sion Gate), 31, 34.
 Bait al Mukaddas (the Holy City), 31.
 Balance Sheet for 1887, 56.
 Banias (Balanaë), 74.
 Barometrical Readings, Table of, 209.
 Beisan, Mask found at, 141.
 Beit Iksa, 263.
 Bethlehem, 34.
 Bethesda, Pool of, 115-124.
 ,, The Conduit or Passage
 near, 116.
 ,, Fragments of Carving, 117.
 ,, Church of St. Anne, 117.
 ,, Ancient Tower, 118.
 ,, From the Bordeaux Pilgrim,
 124.
 ,, The Name, 124.
 ,, Notices in Early Writers, 125.
 ,, The Sheep Pool, 125, 133.
 ,, The Five Porches or Porti-
 coes, 126.
 ,, The Nature of the Pool, 126.
 ,, Position of Bethesda, 127,
 132.
 ,, and the Birket Israel, 128.
 ,, Church of St. Mary, 131.
 ,, From the Early Pilgrims,
 131.
 Birds (Dr. Post's Narrative), 177, 179,
 180, 187, 189, 191, 192, 195-201,
 206-209.
 Boar, wild, 180, 181.
 Boat-shaped Graves, 40, 107.
 Bosrah, 202.
 Brak, 208.
 Byzantine Pavement, 17, 57-61.
 Calvary, Notes on, 165.
 Callirhoë (Hot Springs), 188.
 Casarea, Restoration of, 134.
 ,, Carved Masonry, 136.
 Cave of the Sleepers, Muslim Legend,
 271.
 Centre of the World, 260.
 Chinese and Hittite, 246.
 Church of the Angels, 35.
 ,, Peter, 34.
 ,, St. John, 34.
 ,, Sion, 34.
 City of David, 41, 44, 47.

City of David and Accra, 108.
 Circassian Refugees, 194, 198.
 Cooking at the Hot Springs, 188.
 Conduit near the Pool of Bethesda,
 259.
 Crocodiles in the Nahr ez Zerka, 166.
 Debir, 282.
 Deir Abân, 263, 265.
 Der'ah, Caves at, 200.
 Dove-Cot, Rock-hewn, 192.
 Ebenezer, Site of, 263.
 Errata, 108.
 Figs, Wild, 183.
 Fish, at 'Ammân, 194.
 Flora and Fauna, Moab, Gilead, and
 Hauran, 175.
 Gerash, 198.
 El Ghararat el Kibliyah (Crater), 206.
 Haifa, Capital found at, 139.
 " Sarcophagi found at, 104.
 Hamideh Arabs, Camp of the, 188.
 Haurân, Battle in the, 106.
 Hebrân, Village of, 203.
 Heshbon, 190.
 Hieroglyphies, Comparison, Plate I,
 252.
 Hieroglyphies, Comparison, Plate II,
 253.
 Hieroglyphies, Comparison, Plate III,
 255.
 Hieroglyphies, Comparison, Plate IV,
 257.
 Hittite Language (Method of Study),
 77.
 Hittite Language, Royal Names, 78.
 " Town Names, 81.
 " Grammar, 85.
 " The Syllabaries, 89.
 " Weak Roots, 90.
 " Strong Roots, 97.
 " Corrections and
 Notes, 103.
 Hittite Monuments (Conder and
 Tyler), 150.
 Hittites, Note on the, 39.
 Holy Sepulchre, 32.
 Inscription in the Aksâ Mosque, 278.
 " over a Tomb, 107.
 Inscriptions, Greek, 202.
 Irbid, 200.
 Iskanderûn to Tripoli, 65.
 Jabbok, The, 197.
 Jebel Husha', View from, 195.
 " Kuleib, 202.
 " " Ascent of, 204.
 " el Mashubîyeh, 184.
 " Neba, 181, 183, 186.
 " Okra, 70.

Jebel Siâghah, 181, 183.
 " view from, 184-186.
 Jebel ez Zaitûn (Mount of Olives),
 33.
 Jejazi, 198.
 Jerusalem, New Excavations at, 20, 57.
 " Note on the Excavations, 61.
 " Old Market-place, 19, 57.
 " Idrisi's Description of, in
 1154, 31.
 Jews Returning to Palestine, 21.
 el Jismâniyyah (Gethsemane), 33.
 el Jowallil, 205.
 Kanisah al Kayâmah (Church of the
 Resurrection), 31.
 Kefr Kenna, Carved Stone found, 104.
 Kesab, Missionaries at, 71.
 Kirjath Jearim, 259.
 Kirjath-Sannah, 282.
 Kirjath-Sepher, 281.
 Konawât, 205.
 Kubbah as Sakrah (Dome of the
 Rock), 33.
 el Kufr, Village of, 202, 203.
 el Kufair esh Shurki, 190.
 Külât el Bagras (Mansio Pangrios), 66.
 Kumamah (The Dung-hill), 31.
 Kureyah Village, 202.
 Lake of Sodom and Gomorrah, 34.
 Lake of Tiberias, 34.
 Latikeyeh, 73.
 " Mosque of the Sultan
 Ibrahim, 74.
 " Roman Theatre, 74.
 El Leja, 207.
 Lejjûn, Recent Discoveries, 103.
 Leopards, 189.
 Lydda and Antichrist, 40.
 Ma'in, Ruins of, 189.
 Mâ-mâs, Roman Theatre at, 104.
 Marash Lion, 41.
 Markab, Castle of, 75.
 Marriage Festivities, 203.
 Masjid al Aksa and Haram area, 32.
 Medeba, 190.
 Meeting of the General Committee, 282.
 Meteorological Observations, 167, 237.
 Missionaries at Kesab, 71.
 Moab, Table-land of, 186.
 Neby Dhahy, Note, 166.
 Neby Musa, Pilgrimage to, 178.
 Nehemiah's night-ride, 46.
 " Wall and the Royal Sepul-
 chres, 288.
 Notes and News, 1, 53, 111, 171.
 Notes on the *Quarterly Statement*, 39.
 Notes on the Way to the "Place of
 Burning," 106.

- Orontes, The River, 66.
 Palestine according to the Arab Geographers and Travellers, 23.
 Penuel, 197.
 Plants, List of, 211-237.
 Postal and Telegraph Stations, 195, 200, 206.
 Postal and Telegraph Stations, Difficulties at, 206.
 Propylæum of Constantine's Basilica, 57, 61.
 Rabbath Ammon, 194.
 Rabbits, 200.
 Racial Types, Early, 160.
 " " Notes on the Plate, 164.
 Railway, Jaffa to Jerusalem, 21.
 Rame, Tell er, 181.
 Ramoth Gilead, 197.
 Rat, Bushy-tailed, 180.
 Roman Road, 202.
 Royal Necropolis at Sidon, 5-9.
 Ruad (Arvad Aradus), 75.
 St. George, Chapel or Tomb of, 69.
 es Salt, 195, 197.
 Samaritans, The, 50.
 " Ancient copy of the Law, 50.
 Scene at a Well, 201.
 Second Wall, Line of, 15, 62-65.
 Sepulchre of the Kings, 48.
 Seleucia, Sarcophagi at, 69.
 " Canal at, 69.
 Seleucia, Amphitheatre at, 69.
 " City Gates of, 69.
 " Fortifications, 69.
 " Piers and Harbour, 69.
 " Tunnels, 69.
 Shefa 'Amr, Tombs at, 105.
 Sheikh Felah, 187.
 Shuhba, Ruins of, 207.
 Siâghah, Jebel, View from, 184-186.
 Sidon, Excavations at, 140.
 Sidon Sarcophagi, 5-9.
 Speech of Lycaonia, 250.
 Statues at Askalon, 22.
 Stores, Grain, 182.
 Succoth, 197.
 Suediyeh (Seleucia), 68.
 Surafand, 106.
 Suweidah, 206.
 Tartûs (Antaradus), 75.
 et Tayyibah, 201.
 Telegraph and Postal Stations, 195, 200, 206.
 Tell el Hammân, Hot Spring, 180.
 Tell Shiha (Crater), 206, 207.
 Temple, Model of the, 21.
 Ten Tribes, the, 144.
 Tiberias, Lake of, 105.
 Tomb in Wâdy Yasûl, 20.
 " of el 'Azar (Lazarus), 34.
 " of Rachel, 34.
 Umm el Jemal, Jewish Colony, 138.
 Umm ez Zeitûn, 207.
 " Via Maris," the, 166.
 Wâdy Jahannum (Valley of Gehenna), 34.
 Wâdy es Sir, 192.
 Wâdy el Urdunn (Valley of the Jordan), 34.
 Wâdy ez Zeid, 202.
 Zion, Notes on, 42.
 Zophim, Field of, 186.

THE PALESTINE EXPLORATION FUND

NOTES AND NEWS.

An important change has been made in the executive branch of the Society. Mr. Walter Besant, who has for some time been practically an Honorary Secretary, has now formally resigned his post as Secretary and been elected by the Committee their Honorary Secretary. He finds that other work, which he cannot refuse or postpone, now so much presses upon him that he can no longer, as heretofore, give the time and attention necessary for the proper management of the affairs of the Fund. He proposes, however, for the present to continue his services as adviser, and can generally be found at the Society's offices in the afternoon by appointment.

Mr. George Armstrong, who has been connected with the Society almost continuously since the year 1871, has been appointed Assistant Secretary. Mr. Armstrong went out to Palestine in November, 1871, in order to commence the Survey. In 1875 he came home with Captain Conder, and remained at home drawing the maps and working out the observations while Col. Kitchener finished the Survey of Western Palestine. In 1881 he went out again with Captain Conder in order to survey the Eastern part of the country. Since his return he has been employed in the office as draughtsman. Most of the maps, drawings, and illustrations which have recently appeared are Mr. Armstrong's work. He will continue this part of his work. His appointment will give great satisfaction to the many friends of the Fund who have made his acquaintance.

The first practical effect of his appointment will be that all cheques and postal orders *should be now payable to his order*. They should also be crossed to Coutts and Co. A better plan, and one which is much more convenient for the Committee, as it ensures safety and saves clerical labour, is for every subscriber to fill up a form and give it to his banker, instructing him to pay on the 1st of January his annual subscription to the Society.

The year 1887 was marked by many important discoveries :—

- (1) First in importance, perhaps, must be placed Herr Schick's discovery of the Byzantine pavement (*see* p. 17, *infra*), which in the opinion of most cannot be anything other than the open space made and paved by Constantine in front of his group of churches. It is of less importance, but it is still interesting to ascertain that on this pavement stood the vaulted street, long lost, described in Crusading accounts. A fuller note on this discovery appears in this number.

Next must be mentioned the Sidon tombs. Professor Hayter Lewis has

given an account of these, which will be found in its place, together with Hamdi Bey's own paper on the subject, republished by permission of the Editor, from the *Revue Archeologique*. In this place we may only point out that no more valuable and interesting find of this kind has ever been made. For drawings and photographs of the tombs we must now wait until Hamdi Bey's promised work on the subject appears.

- (3) The district of Jaulan, the Golan of Manasseh, which has been surveyed, is 39 miles in length at its longest points and 18 in breadth. It comprises an area of 560 square miles. On the best map of Palestine there are found about 150 names. On Schumacher's there are 600, being the names of ruined towns, springs, ancient highways, remnants of oak forests, perennial streams, great fields of dolmens, with some remarkable volcanic features. The volcanic mountain, Tell Abu en Nida, rises to the height of 4,123 feet, and that called Tell Abu Yusef to the height of 3,375 feet. Herr Schumacher has drawn upwards of 152 plans and sketches of the country. He has collected a great variety of information on the manners and customs of the people. He has made special plans of the hot springs, &c., of Amatha, the Zaphon of Joshua xiii, 27, and of Kulat el Husn-Gamala, Susitha and Fik.

The district of Northern Ajlûn, also surveyed, contains 220 square miles, a population of 10,460, and shows on the map 334 names of places. There are in the Memoir detailed plans of 100 places — churches, theatres, vaults, mausoleums, temples, walls, columns, capitols, street pavements, sarcophagi, caves, cisterns, birkets, aqueducts, and ornamental work; there are collections of mason's marks, Greek inscriptions, drawings of dolmens and stone walls; and there are detailed plans of Umm Keis (Gadara) and Beit Ras (Capitolias).

The district contains about a thousand dolmens scattered over extensive fields; the fertility of the soil is inferior to that of the Hanan; the water supply is chiefly derived from cisterns; there are everywhere patches of forest, now chiefly oak, though the remains of oil presses show that there were previously olives. Herr Schumacher gives also an account of the inhabitants, who are chiefly Moslems.

- (4) A capital in white marble, found in the Temple area, and engraved for the January (1887) *Quarterly Statement*, has proved of the highest interest for architects. It is of Ionic-Byzantine style, and is said by Mr. P. Pullan, one of the best authorities on the subject, to be a work of the eighth or ninth century.
- (5) The Recovery of the ancient wall of Tiberias with its Acropolis. It is now proved that the Herodian city was no mean little Galilcan village, but a noble city, with a great wall three miles in length, and a stately citadel.
- (6) The attempted reading of the Hittite Inscriptions by Captain Conder. There have been many attacks made upon his method, which is put forward by the Committee not as the true solution of the problem, but as Captain Conder's solution. He is himself confident that in the main his method will be adopted.
- (7) The publication by Mr. Guy le Strange of the catalogue of Arab writers who have spoken of the Dome of the Rock and the Church of the Holy Sepulchre. So many loose statements have been made as to what Arab historians have said upon this subject that it was most desirable to get

once for all an exact statement of what has been written. Had this been done before, a great deal of controversy might have been saved.

- (8) Herr Schick has discovered what he believes to be the remains of Herod's amphitheatre (*Quarterly Statement*, 1887, p. 161).
- (9) Herr Schumacher has sent home his Survey of Pella and the adjoining district. This will be printed in the same manner as the Survey of the Jaulan, and will be presented to subscribers. The memoir on this interesting place (where the Christians retreated on the outbreak of the troubles with the Romans) contains—(I.) a plan of the ruins, valley, &c., on the scale of six inches to the mile; (II.) about a dozen photographic views, with upwards of 40 plans and sketches; (III.) plans of the ruined tower Kh-Fahl, the Acropolis, two temples, the mausoleum, the cemetery covered with sarcophagi, certain curious caves, the great Basilica, a mound with other caves having stone doors, hot springs, and one Greek inscription. There are also 83 pages of description. We have also to thank Herr Schumacher for sending many notes of objects of interest observed by himself from time to time.

This is a very fair record of work for the year. As for 1888, it remains to be seen what will be done in the way of discovery. As regards publications, we have already announced that we intend to give to subscribers Schumacher's "Survey of the Jaulân" and his "Survey of Pella and Northern Ajlân," so printed that they may be bound up separately in volume form uniform with Conder's "Tent Work."

We have received, but must keep over for the present, Dr. Post's narrative of his scientific expedition in the Trans-Jordanic region in the spring of the year 1886, with an account of the flora in the region round Damascus. This will be published immediately. Many of the plants are new.

Subscribers will please note that publications announced as nearly ready are often delayed by some cause for which the Secretary is not responsible. There has been, for instance, a great deal of delay about the Catalogue of Photographs. This is now ready. And about the List of Old Testament Names. This is also now ready. And about the New Testament Names. This list is in the printer's hands. And about the Index of the "Survey." This now wants only the Hebrew portion, which is daily expected.

The same remarks apply to the Pilgrim's Text Society. Two works are in the press and almost ready. We hope to be more expeditious in our productions this year.

The "Memoirs of Twenty-One Years' Work" is now in its third thousand. Subscribers are earnestly requested to use this book as a means of showing what the work has been, and what remains to be done. Copies are given to every subscriber who wishes to have one, and additional copies can be procured at a great reduction in the price, *by subscribers only*, by writing to the central office.

Will all the subscribers to the Palestine Fund remember—(1) that it helps the Committee very much if subscriptions are paid early in the year? (2) Next, that it saves a great deal of trouble if they are paid to Coutts & Co. direct by a Banker's order? and (3) That whenever they are due it saves a great deal of labour if they are paid without waiting for a reminder? The clerical staff of

the Society is very small, and it is greatly desired not to increase the management expenses, and not to overburden the work of the office.

The following books are now published uniform in size and appearance :—Conder's "Tent Work ;" Conder's "Heth and Moab ;" Schumacher's "Across the Jordan ;" "The Memoirs of Twenty-One Years' Work ;" Conder's "Syrian Stone Lore." Subscribers can have the whole set, together with Hull's "Mount Seir," for 25s. carriage free.

Mr. Armstrong has prepared a list of the photographs belonging to the Society arranged alphabetically according to those Bible names which are illustrated by views. This list is now ready. Those who wish for a copy may send in their names.

The long-promised List of Old Testament Names, with their identifications, is now ready.

The income of the Society, from September 13th to December 22nd, 1887, inclusive, was—from subscriptions and donations, £461 10s. 0d. ; from all sources, £498 5s. 11d. The expenditure during the same period was £415 4s. 4d. On December 22nd the balance in the Banks was £315 12s. 10d.

Subscribers who do not receive the *Quarterly Statement* regularly, are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

The only authorised lecturers for the Society are—

- (1) Mr. George St. Clair, F.G.S., who has lately returned from his Eastern tour, and is giving Lectures for the Society in all parts of Great Britain. His subjects are—

- (1) *The Buried City of Jerusalem*, and General Exploration of the Holy Land. Numerous diagrams.

- (2) *Buried Cities of the East*. Numerous diagrams.

- (3) *Sight-seeing in Palestine*. Lantern views, where local help can be obtained.

Address : G. St. Clair, Bristol Road, Birmingham ; or at the Office of the Fund.

- (2) The Rev. Henry Geary, Vicar of St. Thomas's, Portman Square. His lectures are on the following subjects :—

The Survey of Western Palestine, as illustrating Bible History.

Palestine East of the Jordan.

The Jerusalem Excavations.

A Restoration of Ancient Jerusalem. Illustrated by original photographs shown as "dissolving views."

- (3) The Rev. James King, Vicar of St. Mary's, Berwick. His subjects are as follows :—

The Survey of Western Palestine.

Jerusalem.

The Hittites.

The Moabite Stone and other monuments.

- (4) The Rev. James Neil, formerly Incumbent of Christ Church, Jerusalem.

THE SARCOPHAGI OF SIDON.

THE chief portion of the following appeared in the "The Times" of December 8th, 1887 :—

During a recent visit to Constantinople I was enabled, by the kind introduction of friends, and by a letter from the keeper of the Greek and Roman antiquities at the British Museum, to obtain interviews with his Highness Edhem Pasha (late Grand Vizier), and with his Excellency Hamdi Bey. They received me with great kindness and courtesy, showed to me numerous and very beautiful photographs of the sarcophagi, and explained to me such details of the colouring, &c., as could not be there shown.

One of the interviews with Hamdi Bey was at the Museum, where some of the sarcophagi are placed, uncovered, and I could, therefore, see the style of carving of their decorations, which is in an absolutely perfect state.

Of the remainder, and of the sculpture and painting, I can judge only by the photographs and the descriptions given by his Excellency Hamdi Bey personally to myself, and which are to a large extent in his own words. They may form useful addenda to the very admirable account given in the last *Quarterly Statement*, and also to Hamdi Bey's own description in the last number of the "Revue Archéologique." I did not see these until after my return to London. The shaft was about 16 feet by 13 feet, and 50 feet deep to the floor of the tomb at its base. In chambers leading out of it, of which he gives plans and sections in the "Revue," were found the following :

Three Phœnician anthropoid sarcophagi, two of these being in white marble (one male and the other female), and the third in black marble (female).

Seven sarcophagi of Greek design of different epochs, carved out of Greek marble blocks.

Three of these are similar, and are simply in the form of pedestals, without any figure sculpture, but with beautifully moulded and enriched cornices and bases, which much resemble those of the sarcophagus in the British Museum brought from Crete, and numbered 44a. The covers are coped, and with pediments and acroteria. The fourth is of the peculiar tall Lycian form, surmounted by a curved roof with gables, of which we have two good examples in the British Museum. But, in place of the usual panels in and beneath the gables, the Sidon tomb has sphinxes and other sculptures, which are purely Greek. (It is to be noted that although the Lycian tombs at the British Museum have the usual panels, there are carved in them winged sphinxes of the well-known Greek form, some sitting and others recumbent.) On one of the long sides there are splendidly sculptured two cars with four horses each in full career. On the other side is a hunting scene. The fifth sarcophagus (not in the Lycian form) is equally well sculptured with Assyrian subjects.

The sixth represents a Greek Ionic temple in antis, but with three-

quarter columns only between the two antæ, and three-quarter columns to the sides. Between each two columns or antæ is a female figure showing signs of deep affliction. In all there are eighteen of these statues. The temple rests on a stylobate, having a finely moulded base and surbase, the dado being enriched with figures, partly sculptured and partly painted. The cover represents the roof of a temple, and in the pediment at each end is a fine group of sculpture. As a curious variation from the temple form, there is along each side, surmounting the cornice, a tablet, on which is carved a funeral procession. Such a decorative feature is not unusual in sarcophagi of late date, one such being in the British Museum, and many in the Louvre ; but they are usually without any mouldings, and I can call to mind no example of such a feature surmounting the cymatium in any temple.

All the above sarcophagi show large remains of coloured decoration, and, as described to me, confirm Hittorff's theories as given in his work on Sicily.

The seventh sarcophagus is the grandest of all. It is out of one block of white marble, about 11 feet long, with a coped and pedimented cover, and having no columnar decoration, but with an enriched cornice and base, the panels between these, on each side, being filled with sculptures of marvellously fine execution. On two of the sides the subject is the chase ; on the other two are represented combats between warriors both on horse and foot. One prominent figure reminded Hamdi Bey of that of Darius in the famous mosaic from Pompeii (and having seen this recently I quite agree with him), and certain characteristics on another of the principal figures induces him to assign it to Alexander.

In any case, there can scarcely be a doubt that the sculptures represent a battle between Greeks and Persians, and most probably between Darius and Alexander. The cover of this magnificent tomb is of the ordinary coped form, but is enriched with rows of heads on the eaves line and on the ridge—a very unusual style of finish, but which may be seen partly carried out on a small scale on one of the Greek sarcophagi figured in Sir C. Fellows's "*Asia Minor*." At each end of the eaves is a lion. This also reminds one of the lions' heads and fore paws sculptured in the roof of another Lycian tomb figured in the same work, and as may be seen in the tomb (No. 1) in the British Museum.

The architectural details of all these sarcophagi, so far as I can judge from those which I saw and from the photographs of the others, are of the Greek type of the best period, without a trace of Roman influence, and the sculpture appears to be of the highest class. It is altogether different from the bold style of the Pergamus sculpture, and much more nearly resembles the beautifully delicate carving of the Parthenon frieze, of which the horses, the figures, and the drapery of the Sidon monument strongly remind one.

Hamdi Bey thinks that it is probably by Lysippus or his school ; but as to this only some one specially qualified by a study of ancient examples (and such a one no doubt he will consult) could give a definite opinion.

He will have to determine, to begin with, whether the sculpture is the product of an artist accustomed to work in marble, or whether it is not that of one accustomed to work in bronze. I can only venture to suggest, from certain details, that the latter is the case.

But it is not only by the sculpture that this monument has been adorned. It has been so, in the most careful and artistic way, with colouring, which was (and I trust still is) in a perfect state of preservation, and producing a charming effect, each of the different reds, purples, violets &c., being put on in various tints and gradations with great delicacy, gold being sparingly applied and with great judgment. The spears, &c., are of bronze. The flesh of the figures is not coloured.

To show the care which has been taken with this decoration, I may mention that the portions of marble which have been left untinted have been treated in three different ways—viz., (1) by the ordinary finish, (2) by being slightly roughened, and (3) by an exquisitely finished surface such as one finds in the finest Greek sculpture. The reader will, no doubt, have noticed the striking difference between the subjects of these sculptures and those on the grand Greco-Roman sarcophagi, which are so numerous in our Museum. I am fairly well acquainted with those in the Louvre and Vatican collections, and can say that, almost without exception, the sculptures on these (often beautiful) monuments represent mythological scenes. But the Lycian tombs, judging from the engravings in Sir C. Fellows's work, have often such realistic scenes of battle, hunting, and procession as are above described on the Sidon monuments.

As to the date of all these works, except the well-known Phœnician sarcophagus (to which I allude below), there is no guide whatever beyond what the sculptures tell. The absence of any inscription is not surprising, inasmuch as very few of the sculptured sarcophagi (chiefly Græco-Roman) left to us are inscribed, and I have Hamdi Bey's authority for saying that there is not a line, not a word, which could give a clue to the date, nor anything definite as to the persons for whom these splendidly adorned tombs were made.

How was it that a great sepulchre should have been hewn 50 feet deep in the solid rock, chambers carved out from it, these immense blocks of the finest marble brought from Greece, carved by the best Greek sculptors, painted (it would seem) by the best Greek artists, and then lowered into their resting-places in times of no great antiquity, and yet not a single record of any kind be left to give a clue to the names of those for whom such great works were done? Possibly in the careful study which Hamdi Bey is giving to the subject this question may receive an answer.

It will be months before the sarcophagi can be seen by any one, as it would be highly dangerous to expose them, however slightly, to the dust and damp of a Constantinople winter, as would be the case if they were uncovered before being placed in the building now being erected for their reception, and in which it is proposed to enclose them in glass cases as has been done with the Archaic statues recently found in the Acropolis at Athens. To preserve their colouring during their removal from Sidon

the greatest care had to be taken. The workmen were required to wear gloves, and the sculptures were protected by having cotton wool stuffed behind them most carefully and round them. This was done by Hamdi Bey himself, the whole then being covered by layer upon layer of soft material.

The last sarcophagus to which I shall allude is the famous one of the Priest and King Tabnite, the account of which occupies a large portion of Hamdi Bey's article in the last "*Revue Archéologique*." It is of black marble, the inscription on it showing it to have been the tomb of the son of Esmunazar, King of Sidon (I give the name as spelt on the tablet in the Louvre). But Tabnite's tomb differs in many important particulars from that of his father. Both are anthropoid, but Esmunazar's, of which we have a copy in the British Museum, shows the human form only in the head and shoulders, the lines of the sarcophagus being carved thence straight down in a tapering form to the raised tablet which marks the position of the feet. This is the case also with 10 out of the 11 other sarcophagi in the Louvre brought from Sidon, and in the only one (I believe) in the British Museum brought from the same site. But Tabnite's tomb has the flowing lines which may be seen in the numerous Egyptian anthropoid sarcophagi which are in the same collection and in our own Museum, and which give to some extent the outlines of the figures. One corner of this tomb has been cut off, thus giving it an irregular shape, and this part has been polished, and a band of Egyptian hieroglyphs, which passes round the block, is carved round this polished corner.

We can scarcely suppose that a king who could afford to have so splendid a tomb made for him would accept an imperfect block of marble for it, and it seems likely, therefore, that it was made originally for another person in ancient times in Egypt, and repaired and re-used at a later period for Tabnite.

The descriptions and drawings of this interesting tomb will form one of the most attractive chapters in the detailed and illustrated account of the Sidon monuments which Hamdi Bey is now preparing for publication. I should much liked to have given sketches of many of these sarcophagi, and I pointed out to his Excellency that by such rough memoranda the curiosity of the artistic world would be much more excited than by any description in writing, and that it would be a good preliminary announcement of his forthcoming book; but his particular wish, to which I, of course, yielded, is that he himself should be the first person to publish any drawings whatever of these splendid monuments; and considering the amount of care which he took in their preservation, every one will be glad to concede to him the full honour and credit of first conveying the description of them to the public in an authentic form. No doubt it would have been better to have retained them on their ancient site, if they could have been so retained with safety. But my experience in the East makes me confident that such a course would have resulted in the eventual destruction of these splendid monuments by Moslem fanatics and Arab dealers.

Athenæum Club.

T. HAYTER LEWIS.

ACCOUNT OF A ROYAL NECROPOLIS DISCOVERED
AT SAIDA BY HAMDİ BEY.

(From the Revue Archéologique).

I ARRIVED at Smyrna, on April 20th, 1887, with the object of taking part with my friend and colleague, Demosthenes Bey-Baltazzi, in the Archaeological Mission that had been entrusted to us. It was necessary that we should proceed to Saida to study a valuable necropolis recently discovered, and to draw up from its deep vaults the series of sarcophagi which are about to be described. On reaching Saida (April 30th) we immediately repaired to the ground ; and I descended by means of a rope to the bottom of the large shaft which gave access to the large vaults containing the sarcophagi. This shaft, sunk through a thick layer of limestone, was 13 metres in depth. I visited the vaults, which were seven in number, in succession, and was struck by the value, beauty, and variety of the marble sarcophagi found therein. Out of the seventeen sarcophagi nine were covered with very beautiful many-coloured sculpture.

On the following day we made every effort to proceed with the work of extraction without hindrance ; but this was anything but easy, the largest of them measuring 3m. 30 long and weighing nearly 15 tons.

With the friendly help of Sakeh Bey, Governor of Saida, who placed everything we required at our disposal, and the intelligent co-operation of Beshara-Effendi, chief engineer of the vilayet, a tunnel with a drop of 12 per cent. was bored, and all the sarcophagi were drawn out without any accident. The whole work occupied twenty-five days. This valuable necropolis is to be the subject of a detailed monograph. One part of the contents is on the eve of being sent to the Imperial Museum at Constantinople. A second necropolis was discovered by us. With the object of elucidating the description which I am about to make, I add to this memoir a plan and a general plan of both these monuments, which are placed together (see pp. 140 and 141).

At the north-west angle of the vault V of the first necropolis, and above the No. 10 sarcophagus (see plan), we perceived an irregular hole, which hardly admitted of the entrance of a man. As I wanted to know what it could be and where it might end, I had a ladder brought and was easily able to reach it, and to get halfway into it so that I could well examine the interior by the light of a lamp. I easily recognised a Phœnician tomb, which had been despoiled by the violators of the necropolis, by means of this little hole which they had made.

These greedy plunderers struck the walls of the vaults with an iron, and wherever they heard a hollow sound they divined the existence of a tomb or vault on the other side, which they proceeded forthwith to open. This one was entirely empty, but prior to our arrival at Saida some fragments of shapeless bronze had been found.

The question naturally presented itself as to which way the tomb had been dug and from whence the dead, whose bones I there saw, had been introduced. On entering I examined the upper part and was able to see and count five large slabs which closed it above and which were placed transversely on the tomb.

I communicated my observations to my friend Baltazzi-Bey, and we decided on May 22nd to open a shaft in such a way as to fall directly upon these slabs.

The next day, after having cleared away 1m. 20 of vegetable soil, we came upon limestone grit, then making our workmen proceed 2 metres further towards the north we continued to excavate, and on the 24th we could recognise the four walls of a large rectangular shaft bearing marks of a pick-axe.

The large sides from south to north measured 4 metres, the little sides 3m. 20 ; it must be mentioned that the walls of this well were hewn with care. It went down across a layer of very friable limestone grit, and was full of rubbish of the same sort, occasionally mixed with vegetable soil, the workmen found placed in a hollow in the side of the shaft a lamp in the form of a splayed and twisted patera, and resembling those which M. Renan had collected at Saida, and which, according to M. de Sauley, have been likewise met with in the tombs of the Kings at Jerusalem. At a depth of 5 metres we perceived the upper layers of a wall on the side looking north (see plan) ; evidently we had here a wall forming the entrance to a vault, and we were happy to find that it was perfectly intact.

Om. 50 lower, on the opposite wall, the upper part of a vault appeared, being precisely the one where the desecrated tomb was found. It was not walled, and we could see it was literally crammed with rubbish of the same nature as that which filled the well. The same day other lamps similar to the former one were found.

By May 28th we reached, at a depth of 7m. 50, the bottom of the well ; here the layer of limestone grit (called in this country *ramle*) ended, and hard limestone appeared.

On the 29th, at an early hour, I descended into the shaft, accompanied by Beshara-Effendi, and some workmen ; and I had a breach made in this intact wall by withdrawing some rows.

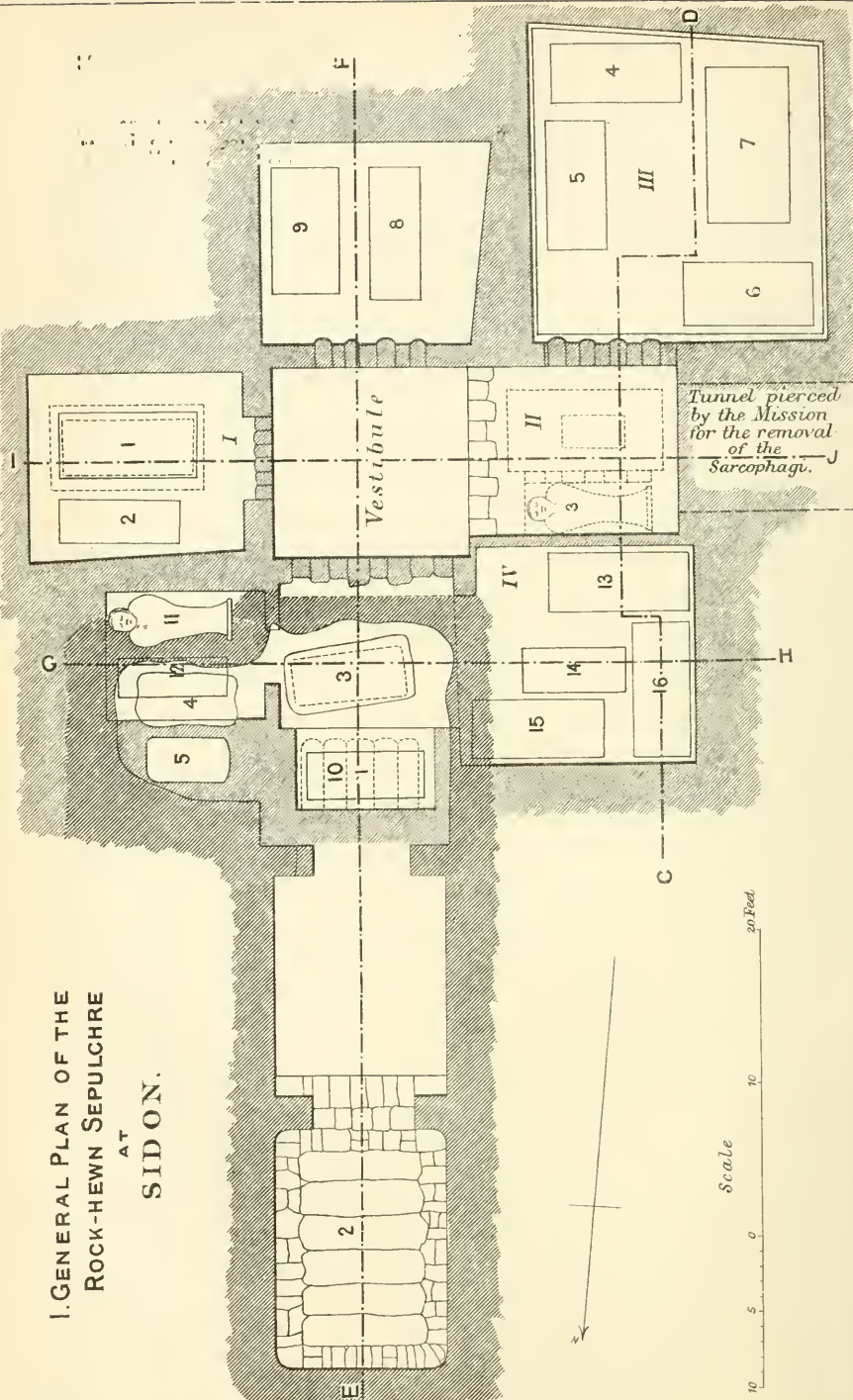
Then, by means of a magnesium lamp I saw that this vault did not contain any sarcophagus, that the ceiling was vaulted, and that it, as well as the walls, was faced with a thick plastering, which plastering had in great part fallen and completely covered the floor.

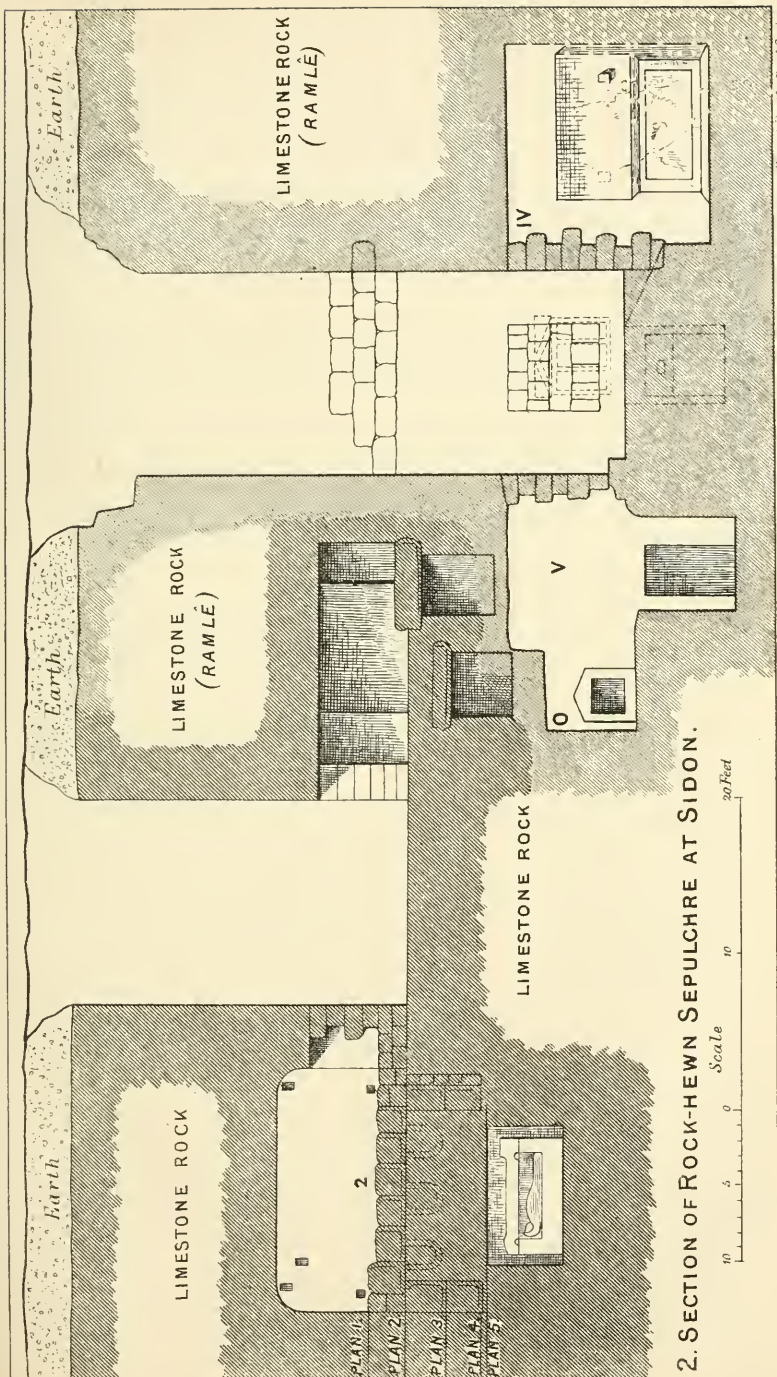
I also noticed on the walls of the vault large holes, which had been symmetrically bored at intervals, and which were intended for the reception of immense beams, by which, by means of ropes which were fastened on to them, sarcophagi or blocks of stone of immense size could be let down.

At the outset, therefore, I had reason to hope that once the vault was clear we should find slabs, and under the slabs some sarcophagi.

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I. GENERAL PLAN OF THE
ROCK-HEWN SEPULCHRE
AT
SIDON.





I had the door entirely freed from the wall, which blocked it up, and set the workmen to clear the vault.

The vault measured 4m. 60 by 3m. 40.

It was then that we discovered, in the north-west angle, two bronze candelabra and some terra cotta lamps, which were similar to the preceding ones, and which had been thrown down by the fall of the plastering off the walls and ceiling.

This plastering occasionally reached a thickness of 0m. 20, and was covered over with a thin gray-blue coating.

The candelabra are in good preservation, and have a fine patina ; they are not of equal height. The largest measures 1m. 70, and the other 1m. 55. They are each composed of three parts, and were bound together by a stick running inside the stem ; this wood has completely perished.

The vault being now clear of its incumbrances, I saw that it was paved with six immense blocks in a transverse direction of its length.

(Page 144, plan 1.)—These slabs were of limestone grit, and of different widths, varying from 0m. 50 to 0m. 80, with a length of 2m. 60.

The last at the further end of the vault was varied 0m. 18 above the others, and formed a sort of bench.

In removing the small hewn stones which edged the four sides, I ascertained that they were 0m. 65 thick, and themselves rested on other blocks placed in a reverse direction.

It took more than a day to break up and remove this first row of slabs.

In arrangement, the second row was quite different to the first. It consisted of an immense rectangular slab, placed in the middle of the vault, measuring 3m. 62 by 1m. 80, with a border of six slabs ; these latter did not extend to the wall from which the plaster continued to fall (page 144, plan 2).

In removing the six blocks which served as a border, I was most astonished to find below a third layer, and to note that the middle piece reached still lower than this latter (page 144, plan 3).

The following day I had this third and last row of bordering removed, and the vault then contained nothing more than an immense rectangular monolith, with a length of 3m. 42, width of 1m. 70, and thickness of 1m. 60, cubing 9m. 30 (page 144, plan 4).

The monolith occupied the centre of the vault in its longitudinal direction.

It bore on the upper part of its thickness eight horse-shoe shaped grooves : three on each of its large sides, and one on the small one ; the grooves were 0m. 12 in width, and of an equal depth. They had served to hold the cables used for letting down this colossal lid, at first to the bottom of the shaft, and afterwards into the vault.

It was perfectly obvious, from the grain of the stone, that this large block, as well as all the slabs surrounding it, had been brought from elsewhere.

The lid now being clear on every side, we had two lifting-jacks brought, and, setting them in action simultaneously, managed to lift it

on one side from 0m. 10 to 0m. 15, and it was only then that I was able to perceive, by means of a jet of magnesium light, that this monolith concealed a magnificent black marble sarcophagus, anthropoid in shape, admirably preserved and covered with inscriptions. It was only the day after the 30th of May that I began to have this monolith sliced off horizontally, so as to reduce two-thirds of its thickness, in order to be able to lift it and turn it up against the wall of the vault, so as to allow of the passage of the fine sarcophagus. This operation ended, we could finally examine at our leisure this almost unique and in every respect remarkable object.

Eleven lines of hieroglyphic writing in longitudinal lines covered the base of the lid, starting from the large collar, which ended in a large winged globe, having on its left and right other hieroglyphic signs. A Phœnician inscription, carefully engraved, covered in its turn the horizontal portion of the legs.¹ This inscription occupied seven and a half lines. As in the sarcophagus of Eshmunazar, the collar is fastened to the shoulders by two hawks' heads.

Here are the respective measurements of the lid :—

Length from head to foot ....	....	....	2m. 30
Width of shoulders....	....	....	1m. 10
Width of feet ....	....	....	0m. 80
Thickness of feet ....	....	....	0m. 40
Length of hieroglyphic lines ....	....	....	0m. 70
Width .. ..	..	....	0m. 10
Length of Phœnician inscription ....	....	....	0m. 57

A circle of hieroglyphic writing runs outside the circumference of the sarcophagus, and is of the same form as that of the sarcophagus of Eshmunazar.

The trench in which this precious object was deposited is admirably hewn, peculiar care having been devoted to this result.

The edges and sides are remarkably clearly cut ; a parallelepiped 2m. 60 by 1m. 20 by 1m. 50 deep. They had not forgotten to take the centre of each of the small sides by marking it with a red arrow before placing the sarcophagi exactly on the longitudinal axis. On the shoulder side it nearly touched the walls ; and they had further filled in the small space that remained all round with small stones and a sort of mortar. All this rendered the opening and extraction of the sarcophagus very difficult. We, however, succeeded in doing this without any abrasion or mark resulting therefrom.

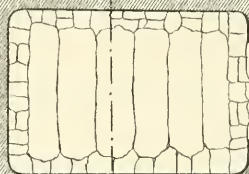
We first raised the lid, which we immediately placed in a temporary box until a passage should be prepared for it across the opposite vault and the violated tomb, No. 1 (p. 141), which the workmen were already clearing out.

The sarcophagus contained the body of a man in fairly good preserva-

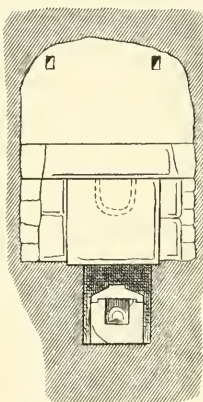
¹ This is the inscription whose translation was given in the last number of the *Quarterly Statement*.

3. PLANS AND SECTION OF THE SEPULCHRE.

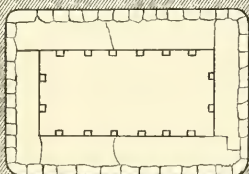
PLAN 1.



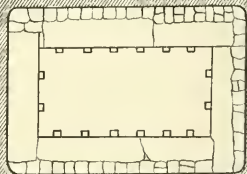
SECTION K.L.



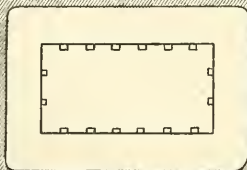
PLAN 2.



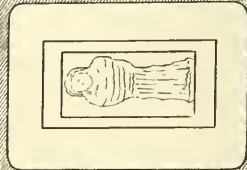
PLAN 3.



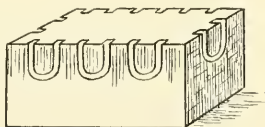
PLAN 4.



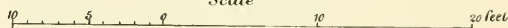
PLAN 5.



GREAT STONE COVER
OF THE
SARCOPHAGUS



Scale



tion. In the entire upper part, emerging from a yellowish mud which filled the bottom of the sarcophagus, the flesh had disappeared. The breast was staved in; the sternum and the toes and fingers had disappeared. A fillet in very thin gold leaf, 0m. 20 long, was on the left clavicle. I had the body brought out, stretched upon a plank, and carried outside. Murad Effendi, the municipal doctor at Saida, charged himself with cleansing it, and putting it into a condition to allow of it being conveyed to Constantinople. All the muscles of the posterior parts are perfectly preserved, as well as the interior organs of the thorax and abdomen. The corpse was laid on a slightly concave plank, which occupied the bottom of the sarcophagus, and assumed its shape. This plank, in complete preservation, is of sycamore wood, and is 1m. 84 long, 0m. 32 wide, on the side of the head, and 0m. 21 on the side of the feet. It was furnished on every side with six silver rings, one of which still remains on the plank. They were fastened with nails, the points of which, after passing right through, were forced back by the blow of a hammer.

They fastened the corpse from head to foot firmly along this plank, upon which very distinct traces that the ropes have left are to be seen near the rings.

In another large anthropoid and perfectly preserved sarcophagus, which was given us to open, we likewise found the body extended on a plank of similar shape, but instead of rings they had been content to simply make holes with which to keep the body in place. I must mention that we found in a third sarcophagus, which was anthropoid and of white marble, the same kind of plank bearing bronze rings fixed in the same manner. In several other Phœnician tombs we collected from round the corpse, which was completely destroyed by the damp, numerous fragments of fillets. The Phœnicians, following in this the Egyptian fashion, endeavoured to mummify their dead, but they carried out this operation very badly.

In the tomb in question we did not find any trace of bandelets. It would appear, therefore, that the body was simply embalmed. I ought to add that in this sarcophagus we noticed the existence of a certain quantity of very fine sand, which we had likewise found in the three other anthropoid sarcophagi which had been given us to open previous to this.

Whilst we were occupying ourselves in extricating this fine royal sarcophagus from the deep trench in which it was found, several of our workmen had already cleared the vault from the south; we were then able to immediately open the second tomb. It was exceedingly badly constructed, and altogether similar to the one that the violators of the other necropolis had ravaged. In this tomb—the body as well as the plank to which it was attached had entirely disappeared—we collected the following objects:—

- 1 fillet of gold leaf.
- 1 gold collar.
- 2 gold bracelets.

- 2 gold symbolic eyes.
- 13 gold beads.
- 1 bracelet ornamented with coloured stones, with a catseye in the centre.
- 1 onyx cylinder, one end of which has a golden cage.
- 13 cornelian beads.
- 1 symbolic eye in cornelian.
- 7 small beads in blue enamel.
- 2 large silver *halkals*.
- 1 silver pin, the tip of which bears the head of a serpent.
- 1 smaller silver pin.
- 1 broken silver box.
- 12 slender silver rings.
- 1 bronze mirror, joined by wrists.
- Different ivory objects (broken).
- 7 bronze rings, belonging to the plank on which they had stretched and fastened the body.

The two tombs, No. 4 and No. 5 (p. 140), had neither slabs nor covers. The trenches were simply covered with earth and stones, nearly to the arch of the vault, and the entrance of this latter was walled. Except some fragments of bones which crumbled into dust directly they were touched, we found nothing. The southern vault, as well as the tombs which it contained, were of very defective workmanship. The piece of ground on which these tombs were discovered, is found in the plain below *Hilaleh*, between the aqueduct and the gardens. These latter, which border it, are called Bostan-el-Mazara (garden of the grottos). In fact, the entrance to two grottos running from west to east and uniting beneath our ground can be seen.

The ground is known by the name of Ayaa; this word is not Arabian. I was informed that the inhabitants of Meppo speak of a legendary Jewish queen who was called Ayaa.

Thus, a woman who gives herself airs in walking is said to walk like Ayaa.

I noticed here that in speaking Arabic they replace the letter caph by ain. Accordingly, instead of Kaleh, Kassir, Karib, they say Aaleh, Aassir, and Aarib. Assuming then the same corruption in the word Ayaa, we must seek to discover whether Kayaa has an Arabic signification. The ground plot of the necropolis is found 34 metres above the level of the sea, and is 1,250 metres distant from the same.

With the exception of tomb No. 1, which had been ravaged by the violators of the great necropolis, all the others had happily escaped the greed of the desecrators of the burial places. I must state, to my great regret, that these to-day are no less terrible than those of preceding ages. The same rapacity and vandalism continue their work of destruction, and, what is the more distressing, is that the so-called Europeans, representing certain great Powers at Saida, in their own interests and the most mer-

cenary spirit, head these devastations. We are assured that, not content with this clandestine speculation, they patronize a manufactory for articles of antiquity and false inscriptions, which is in a village in the outskirts of Saida. But in the interests of science, and so that archaeological explorers should no longer be liable to be duped by them, I did not fail to take the most severe administrative measures in order that this deplorable state of things might be stopped. Finally, I must add that, in spite of Saida and other surrounding country having been ransacked, there still remain treasures to be discovered.

Beirût, June 29th, 1887.

A PERSONAL EXPLANATION.

I.

In the October number of the *Quarterly Statement*, p. 197, appears the following :—"Among other points he [Mr. Schick] shows that Dr. Merrill was misled when he stated that a rock scarp existed there."

This positive assertion of the Editor does me great injustice. In the first place I never stated that "a rock scarp existed there ;" secondly, I have always maintained that *no rock scarp* existed there ; thirdly, I can say, without boasting, that at the time I took more interest in this second-wall matter than any other European or foreigner. I was there every day, and frequently three or four times a day. I reported only what I saw and measured.

About 25 feet west from the line of the second wall there was a scarped wall from 10 to 15 feet in height ; its top was 4 feet out of line with a vertical line drawn from the base of the same wall. What this had to do with the second wall I do not know. I never said that it had, or that it had not, anything to do with it. I mentioned and described simply a fact and never expressed any theory about it. The stones were faced like those of some large fine building. They were smaller than those in the scarped wall at the base of the present Tower of David. It may have been the wall of a building that in some general ruin inclined in towards the city, the bottom remaining in its original position. Among the ruins East of the Jordan I have seen walls perfectly intact but inclined as I have described this underground wall in Jerusalem to have been. Whatever may be the explanation of the existence of this wall at this point, I should describe it as "a scarped wall." Curiously enough, between this wall and the second wall there were no ruins, stones, &c., at least nothing that could be described as ruins, only *débris* of earth.

II.

At the bottom of p. 219, Mr. Schick says :—"Dr. Merrill has, it appears, written what he was told by the masons ;" and on p. 220, "the

chief mason . . . told Dr. Merrill so, telling him what he wished to know."

If what is implied in the second of these two quotations were true, I should be unworthy to be reckoned among Palestine explorers. To do as therein implied would be to act in direct opposition to the rule that I have always conscientiously followed.

But as to the fact—I never had any conversation with any of the masons. The person whom Mr. Schick calls the "architect" (p. 220) I call, or have called, the "engineer;" with him I conversed. We never mentioned "scarp"—scarpd rock or scarpd wall. He made a plan of the building for me, on which is located the line of the second wall as he found it. This does not correspond with the line of the wall as it appears on Mr. Schick's plan (p. 217). The society to whom I gave a copy of that plan ought, for the sake of the truth, to publish it.

On Mr. Schick's plan there is an elbow in the eastern wall of the new building just opposite the street which runs in an easterly direction, and he makes the line of the second wall to run east and entirely free of that elbow. On the contrary, I am certain that the wall ran on the inside, that is, the western side of that elbow. It is so on the engineer's plan. Furthermore, the second wall actually appeared on the street leading north-west from that elbow, and at a point some yards distant from it. On Mr. Schick's plan it stops short of that elbow. Again, when workmen were excavating the street in front of Frutiger's bank for the purpose of laying a pavement, they were suddenly stopped, because they found that they had run into a large cistern, which belonged to that house occupied by the Sisters of Joseph. They were compelled, after a protest had been made, to fill up the street again. Considering how narrow that street is, and how wide the foundations of the second wall are, the wall, running where Mr. Schick places it, would interfere with the cistern; in other words, the second wall and the cistern cannot both occupy that space. Mr. Schick has made the north end of the wall run too far east, and, moreover, he has not shown so much length of wall as actually appeared, proved by my own measurements. These facts I am confident of. I am showing no discourtesy to Mr. Schick when I state what he himself freely admits, namely, that he has a theory to maintain, which is that the Holy Sepulchre is the true site of Calvary, and in order to save this theory the second wall must bend eastward from the elbow referred to. Personally I have no theory to maintain, and all that I am insisting on at present is that the remains of the second wall should be located where I actually saw them, and that as much length of it should be represented as actually appeared.

SELAH MERRILL.

Andover, Mass., U.S.A.

EDITOR'S NOTE.—The plan referred to has been sent back to Dr. Merrill, and if he still desires it shall be published in the April *Quarterly Statement*.

THE BYZANTINE PAVEMENT NEAR THE CHURCH OF THE HOLY SEPULCHRE.

JERUSALEM, *October*, 1887.

I. IN the year 1860, amongst the many Christians killed at Damascus and the Lebanon, there were a number of Roman Catholics and their churches, convents, and houses destroyed by the fanatical Moslems. France, the Western Power protecting the Christians, especially those of the Roman Catholic creed, demanded compensation. It was proposed by the Ottoman Port to give in exchange the so-called "Khankeh" at Jerusalem to the Catholics, for those destroyed at Damascus by the Moslems.

An order, therefore, came to Jerusalem, that the Governor should not only report at full length on the matter, but should also send exact drawings, or a model of the subject, and it came to pass, that I had to make this requested Model of the Khankeh, and its connection with the Church of the Holy Sepulchre. It was done in wood, and on the scale of $\frac{1}{100}$, and when finished, a document had to be drawn up signed by all the Patriarchs interested in the question, to state that the model was an exact one. In different colours the different proprietorships of all the parts were marked. The model, by the high assembly summoned before the Governor, was found correct, but, as only one side of the Church of the Holy Sepulchre was represented by it, that in which the Roman Catholics have their share, the Greek Patriarch found that the model was too much in favour of this party, and demanded that the other side, belonging to the Greeks, should also be shown. In consequence, a new and larger model was made, comprehending the whole church, and all connections round about it, with the streets. It was a long and difficult work, lasting for many months, but came out to the satisfaction of all. In the course of this work, I had to examine and measure every thing and in detail, and so I found that south-east of the Church there was an ancient "sook" or market, walled up and no more in use, except four larger rooms (vaults) used by Moslems as a turnery—ending (at the west) by a flight of steps leading up to their roofs and further on to the Greek Convent St. Abraham, to an upper story. A few years ago all this was broken down, and a new large building erected on the place.

East of this, there was a piece of ground, embraced by walls and filled up with earth of about 15 feet high, above the street. This was bought by the Russian Government in the year 1862. A larger piece north of it they had already bought in the year 1859, covered with a high hill of earth which became removed and found that there are ruins underneath, and left so for many years. But a visit of the Grand Duke Sergius had the effect that this place (the first one bought) was cleared and searched through very thoroughly, and as I had been requested to oversee the work and report

upon it I have done so. Report and drawings were then published in Russian, but afterwards also in the German language by the German Palestine Exploration Society ("Zeitschrift," 1885, page 245, and following).

The first mentioned piece of land, bought in 1862, was left at this time untouched, the reason for which I do not know. But during this year, 1887, it has been cleared, and ruins have been found, of which I sent a plan to the English Palestine Exploration Fund at the end of March.

Recently these ruins were demolished and cleared away, in order to erect a new building of some ecclesiastical sort. By this clearing a pavement was found of very large, flat, and about 1-foot thick stones, just as it was found in the more northern part, extending on the same level southwards as far as the ruins which were done away, forming one court, all in the same level, about 2,470 feet above the Mediterranean. It was also found that the ruins were in ancient times shops, and that their walls, without any foundations, simply built on the mentioned pavement. So the pavement is not only much older than these shops were, but proves to have been here once a larger free and open place—a "forum," as I have it stated in my report to St. Petersburg, 1883; but I was at that time not aware that it extended so far south.

On looking at the last removed ruins, and the plans of them, comparing the latter with the plan of the shut-up market I mentioned above, and putting both together on an equal scale I found there had been two market-streets, and I thought it to be my duty to preserve the knowledge of them: I therefore send a copy to the Palestine Exploration Fund, and have to remark that what is dark shaded no more exists (on the larger western part a new building of three stories high stands, and on the eastern a smaller one; also a new building will be erected as already stated, according to the painted line in red ink).

As the ruins were not yet cleared, but full of earth, when the Greeks made their new building some parts of it came to stand over the property of the Russians below; and then, when the ruins were removed, the two upper stories of the Greek building at this place were in danger of tumbling down, so they propped it up with very large beams, and the Russians have left the arch on which the whole corner rests until the new masonry shall have been made up, and then no danger of falling will exist.

II. According to the "Assise de Jerusalem," by Count Beugnot (II., p. 531 ff.), there were in the thirteenth century several Market-streets in Jerusalem, viz., the "three streets" crossing the David's-street, and the one of Herbs going southward to the street of Mount Zion and the gate of Zion; another one to the arch of Judas. But besides these three, it is said that, when one is coming towards them from the north, one comes to the arched market (la Rue Couverte) on the right hand, going to the Monastery (not the Church) of the Holy Sepulchre. In this street the Syrians sold cloth.

Connected with this was the "Rue Mal-quis-mal" where meat was cooked and sold to the pilgrims. In the free place were sold fishes, and in a street south of it palm branches.

So I understand the description, and am convinced that in the longer and wider "arched street" with shops on both sides, is the Syrian cloth-market, leading to the Greek Convent of St. Abraham—and that the other, shorter and narrower one, also with shops on both sides, the "Mal-quis-mal" where meat, &c., was cooked for the pilgrims—as shown in plan, and now entirely removed (see I).

In case I am wrong in the interpretation, one more learned may correct me, and say what names these two market-streets had, and what was sold there. To me, it is enough to have pointed them out.

The masonry of the shops of these two streets was built in a very thin, light and easy manner, which proves it was not Crusading work, differing widely from such, and as these shops must have been built after the destruction of Jerusalem by the Romans I think it must be Byzantine work.

At the eastern end, there are six Crusading piers, erected at a later time as I could easily observe, the four northern, a, b, c, d, intended to bear a vault, and over it an upper room, e and f simply to bear one arch, very likely for a stair by which one might go up in the upper room, and to the roofs of the shops, and the northern street. The southern street (in which I entered the words "Mal-quis-mal") was never covered, but its southern boundary wall was strengthened by putting a second wall before the existing thin one, as shown in plan; and so it seems it was done on the east side: the piecing is of another time and description.¹ It seems also that between the piers, a and d, the roadway was upon, and in a later time (the Moslem) shut up.

Under the southern street a conduit for unclean water, or sewer, was found about two feet wide and 6 feet high, put in earth, having masonry on both sides, and covered with flat stones.

I have also to remark, that in later times the northern covered street was shut up in two places, first, towards the east (at the boundary between the Greeks and Russians) a wall with a door and windows to right and left was put in, and very likely made at the time into a room, shut up with a wall towards west. This, however, was, at some later time, altered again—door and windows were blocked up, and the room converted for three narrow shops—as I found them in 1862.

The second blocking up was more west, at the well-mouth, and made for two shops, as I found them, 1862. Behind it and the rooms of the turnery was, at that time, a kind of cellar or magazine belonging to the Convent St. Abraham. As there the roof had some opening so light and air could come in—now it is entirely altered.

The well mentioned is a very large one, forming at the ancient Jerusalem a kind of ditch, into which it was converted, later on, very

¹ Perhaps the remains of a connection with the three market streets.

likely in Hadrian's, or more probably in Constantine's, time, when the Church of the Holy Sepulchre was built.

Now the well is full of silt, as it seems, for centuries never cleansed, and always dirty water from the streets, and even worse places, is running in. On my asking the proprietor of it—the Greek Archimandrite or Captain of the Church of Holy Sepulchre—why it could not be cleaned, he said: “It would cost too much—a very high sum—we must wait for a later time.”

The new building opposite—in south—is going on, of which I will report in due time

As far as I know, there exists no other plan of the ancient and now removed market except the one I send you to-day made by me.

C. S.

JERUSALEM.

October 26th, 1887.

1. In the adjoining, I send you a plan of an ancient market at Jerusalem, during my stay in Jerusalem—broken away—which, I think, may have some interest in studying the town in the Christian area. In the accompanying Notes I have tried to give explanations, and what else I found necessary to remark. When on both sides the new houses are done—if I am still alive—then I will send you a general plan of the entire neighbourhood; to-day I could do it only very imperfectly.

2. I am glad to be in a situation to report that I have got permission to dig in the ground of the Dominicans, near Jeremiah's Grotto, and to follow up the aqueduct. But am sorry to say the work goes rather slowly, and is more expensive than I suggested, as I find the aqueduct was filled up on purpose by the Crusaders, who used large stones for it instead of earth, and have removed the flagging stones on the top, so there is no empty parts, but all full, and often there are found larger stones, which must be broken in pieces. We traced it for about 45 feet; it does not go in a straight line, but has sharp angles. It is 2 feet 9 inches wide and 16 feet deep, entirely cut through the rock. But what I am suspicious about is the level of its bottom, according to my levelling, about 25 feet higher than the one ending on the town wall. However, I will go further on with the clearing, as, even if it is not the Bîreh Aqueduct as expected, something else of interest may be found. I will use up the money I have in hand, and then send you an account of the expenditure, stating everything in detail.

3. *The Wâdy Yasâl Tomb.*—In my last I have written to you to try to get leave from the Pasha for a proper digging. The owner of the place wished expressly not to do this, and he himself went on to break through the rock from another side, following a cleft in the rock, but it proved that there is no real room or an artificial chamber, but simply a cavity by nature, allowing me, by proper lighting, to ascertain in a fuller

degree the exactness, the size, and form, &c., of the suspected sarcophagus; it proved not to be one at all, but simply a play of nature, the one visible side of which is like a sarcophagus covered with a sloping lid; the other side has nothing of the kind, and forms, with the rest of the rock, one piece, so I find further expense useless. The natives, and the proprietor of the ground, disbelieve this, my statement, and intend to break further in to come nearer to it, which I am sure is useless, and am rather sorry that I have troubled myself and you so much about it, but it is, as when a hunter by going about become weary, and bringing no prey home. The explorer becomes very often disappointed, and is, therefore, the more glad when he finds something.

4. During my long life, and especially since I have been in Jerusalem (1846), I have made not only studies on the topography of this remarkable city, but also on the Temple. In doing so I found that many difficulties cannot be overcome, or the questions answered, as long as one deals only with words and plans; but when a model is made of the state of things the solution is very often easy, and near at hand. So I began to make a model of the Temple, and the mountain on which it stood; but having begun, I found it wants such arrangements to show and illustrate the whole history of this remarkable site. After many years' labour, I have so far ended the work that I could show it to travellers, and many of them have seen it, and all have told me that I should write and print the explanation to it, and every one would like to get such one. The writing I have done, and as I know the German language better than the English, I have done it in the same, but found no one undertaking the printing, but became advised to print, on my own account first, the last part—a description of the Haram, or the place of the Temple as it now is.

It was consequently printed here in Jerusalem, and also the pictures made, and the binding; it is now finished, so I take the liberty to send by this post also a copy to your Society, or the Library of the Society, and beg humbly for a favoured acceptance. Some people say it should be translated into English, but I doubt the value of the book for so doing; it will interest only a few people. Very likely the value of it will be recognised after my death, and perhaps my children may then sell the model. I am now about to study the wall of Nehemiah, chap. iii, and to write an architectural history of Jerusalem, of its walls and mode of building, during the many centuries from the beginning in Abraham's time, down till to-day; maps or plans will illustrate it. But I see I have to work a long time—I am now at the time of David and Solomon.

5. The restraints the Turkish Government makes against the Jews coming to Palestine are becoming gradually severe. When coming, they are allowed only to stay one month, and then have to return; when not returning themselves they are sent back by the police, and such desiring to become Turkish subjects could formerly do so without much difficulty, now a very high tax has been imposed.

6. The idea of making a railway to Jaffa has risen up again, and, as it

seems, with more hope; it will be an undertaking by subjects of the Turkish Empire.

The plan I have seen; it was simply a copy of the large map of the English Palestine Exploration Fund, the trace of the line put in, and all names in Turkish characters, and stated the number of souls in all the town and villages for about 12 miles on both sides of the line. It will go down the Waly Rephaim, Bettis, Iswain, Sarar, &c., with a station at Arloulf, on the foot of the mountain, then goes down to Ramleh, Lydda, and Jaffa, reaching the sea north of the town. The road will have only one line, and a very narrow one, so that curves may be made, and it is hoped to bring in more than the interest of the outlay, which some people doubt.

C. SCHICK.

STATUES AT ASKALON.

JERUSALEM, *September 21st, 1887.*

IN my last I told you of some statues discovered by the Governor at Askalon, and what I did in the matter. To-day I wish to tell you some more about and submit some drawings. From Jaffa I get the answer that they do not know anything about the statues, and no photographer there had photographed them. By chance I heard that it was a Jew—a youth in the Israelite Alliance School here—which I soon found out. He showed me his plates, but had no photographs, and to prepare such for me he has first to get permission so to do from the Pasha. I was afraid this might lead to a negative result, so the man allowed me to expose his glasses to the sun, put on my prepared paper, so I get the enclosed figures, to which I make the following remarks:—

Nos. 1 and 2 are taken from the smaller statue, if we may call them so, but they (both stones) are high relief on a flat stone of white marble. The photographs are not good, as the figures were lying in a pit about 10 feet deep and in a lying position. It was tried in vain to put them upright, or at least at such an angle that the instrument would fall in a right angle on them. It could not be effected as the man told me, although the Pasha had ordered the fellahin to do so—as they had no instruments at all. So the view fell in a slanting angle on them, hence appearing too short. Nos. 1 and 2 are one and the same object, the camera only put on two opposite sides. No. 1 shows the whole figure, even to the forefoot (marked †), but No. 2 from the opposite side, taken on a larger scale but not the whole figure. The man said it is in size that of a real human body. The face is greatly injured, and on the head is a curious cover. It has wings and two arms, of which one is entirely broken away, the other also injured. The slab is said to be about 6 feet long, about $2\frac{1}{2}$ broad, and 6·9 inches thick, besides the figure, which projects about 1 foot, on some places even more. The young Jew said: “It looks like a woman

[illegible][illegible]



and the peasants there knew of it for a long time, but considering them as idols kept them buried."

The other one seems to be of much more interest, and is also much larger. As the camera was so very small—the plates only $5\frac{1}{2}$ inches wide and 7 long—it could not be taken in one time, but had to be made in two pieces, Nos. 3 and 4. The stone is about 10 feet long, a little more than 2 feet broad, and about (without the figures) 10 inches thick ; on its bottom, where it forms a pedestal in two sets much thicker, as it will be seen on No. 3. On the pedestal no inscription was found. The kneeling figure Atlas cannot be in full human size—although the Jew told me so—but he said also, his eyes and whole face in an expression at his load (on the shoulder) to be very heavy—the mouth open so that he could put in his four fingers, the left arm injured. His load is a ball or globe, but behind not round but one with the slab on it stands an angel (or genius in full human size, arms and countenance greatly injured—all which is mentioned one and the same stone. So it seems these stones formed once a kind of pilaster in a temple, etc.

The Jew told me, when the figures are taken out he will go down again with a larger camera, and then he hopes to give better photographs. As the matter now stands nothing can be done, and it seems the Pasha is waiting for orders from Constantinople.

No. 5 was tried to take a view from a little of the side, and in one piece it helps only to a little better understanding of the other view (Nos. 3 and 4).

The site on which these figures were found and now lying underground is, according to the description of the young man, inside the ancient town of Askalon, about the middle. As I had no plan at hand when I conversed with him I could not fix the place, but will try to see the place in the *Memoirs*, and then speak again with the young man about the site—of which I will report in my next.

C. SCHICK.

PALESTINE ACCORDING TO THE ARAB GEOGRAPHERS AND TRAVELLERS.

DURING the course of the present year, it is hoped to bring out a work containing all the information to be found in the books of the Arab Geographers and Travellers who have written about Palestine and Syria. My original intention was to have limited the translations to Palestine proper, but the boundary line was not easy to fix. Palestine is but a province of Syria in the Muslim administration, and further remembering that the description left us by the Arab geographers of the various cities in the northern province of Syria is of great interest for the Crusading period, of which some of them were contemporaries, I have deemed it advisable to include in my work everything that had to do with Syria (As Shâm), in its widest sense, from Tarsus and Malatia on the north to

Rafh and the Tih Desert on the south. The eastern and western limits are fixed naturally by the Mediterranean and the great sand-sea of the Arabian desert.

As is well known, the Muslims did not begin to write books till fully two centuries had elapsed after the Era of the Flight ; and our earliest geographer (who is, by the way, of Persian nationality) composed his book in the year 250 A.H., or about the middle of the ninth century A.D. From this period, however, down to the end of the fifteenth century of our reckoning, the names of authors follow each other at very short intervals, and we have over a score of writers, all Muslim, and nearly all writing in Arabic, who have undertaken to describe for us the various provinces of Syria and Palestine.

The accompanying list will give an idea of the mass of material that is available. It must, however, be premised, that in every case we have not to do with the result of personal observation and original information. The Arab writers plagiarised each from his predecessor to a very remarkable degree. Each tried to make his work as complete as possible by incorporating therein all he could gather from previous reading, as well as from personal observation when he had himself visited the places described ; and this constant plagiarism, though it decreases the amount of fresh information, is very valuable for purposes of comparison, and for rectifying mistakes of copyists and filling in lacunæ.

LIST OF GEOGRAPHERS AND TRAVELLERS.

					A.D.
1.	Ibn Khurdâdbih, wrote about....	....	....	....	864
2.	Belâdhurî....	....	”	....	869
3.	Kudamah....	....	”	....	880
4.	Ya’kûbi ....	....	”	....	891
5.	Ibn al Fakîh ....	....	”	....	903
6.	Ibn ‘Abd Rabbih....	....	”	....	<i>circa</i> 913
7.	Mas’ûdi ....	....	”	....	943
8.	Istakhrî ....	....	”	....	951
9.	Ibn Haukal ....	....	”	....	978
10.	Mukaddasi ....	....	”	....	985
11.	Nâsiri Khusrau ....	....	”	....	1052
12.	Idrisi ....	....	”	....	1154
13.	‘Ali of Herat ....	....	”	....	1173
14.	Ibn Jubair ....	....	”	....	1185
15.	Yakût ....	....	”	....	1225
16.	Dimashki ....	....	”	....	<i>circa</i> 1300
17.	Abu ‘l Fidâ ....	....	”	....	1321
18.	Ibn Batûtah ....	....	”	....	1355
19.	The author of the “Muthir” ....	....	....	....	1351
20.	Shams ad Dîn Suyûti ..	....	”	....	1470
21.	Mujîr ad Dîn ....	....	”	....	1496

It may perhaps be interesting to give a cursory note on each of the above mentioned writers, that our readers may have some idea of what manner of men they were, and of the nature of the work each performed.

1. Ibn Khurdâdbih the first name on the list, was, as before noted, a Persian by birth ; as in fact his father's name shows, for *Khurdâd-bih* signifies in old Persian "Good gift of the Sun," or as the Greeks would have said, "Heliodorus." Ibn Khurdâdbih was born about the commencement of the third century of the Hejrah (corresponding to the ninth of our era) and flourished at the court of the Abbaside Caliph Al Mu'tamid at Bagdad. Under his government Ibn Khurdâdbih held the office of Chief of the Post in the province of Jibâl, the ancient Media, and with a view, doubtless, of instructing his subordinates, compiled the Handbook of Routes and Countries which has come down to us as one of the earliest of Muslim geographical treatises.

2. The work of Belâdhurî is of an entirely different order, and only in a very secondary sense geographical. His is the earliest historical account we possess of the "Conquests" of the Muslims. He was born at Bagdad, and receiving his education there during the days of the great Al Mamûn, lived to enjoy the favour of the Caliphs Al Mutawakkil and Al Musta'in. He wrote his great "Book of the Conquest" about the year 869 A.D., and died in 892. His work is unfortunately almost barren of geographical description, the names of the places only being given and nothing more ; all detail is confined to the ordering of the battles and the accounts of those who took part in the action.

3. Kudâmah, who wrote a small book on the Revenues of the Muslim Empire about the year 880 A.D., was of Christian origin, but like most of his compeers found it to his advantage to embrace Islam. He occupied the post of accountant in the Revenue Department at Bagdad, and we know nothing further of him but that he died in 948. His work on the revenue contains some interesting geographical notes.

4. Ya'kûbi (also called Ibn Wâdhib) was both historian and geographer. In his history, which was written as early as the year 871 A.D., he clearly states that the Dome of the Rock was the work of the Caliph 'Abd al Mâlik, and gives the reason that prompted him to construct it.¹ His geography was written some twenty years later than his first work, or about the year 891. It unfortunately has not reached us in a perfect state, but the section relating to Syria is in tolerably good preservation. The work is curious, for it gives notes on the settlements made by the various Arab tribes who had migrated into Syria, otherwise it is little more than a bare list of provinces with their chief cities, and only interesting for the information of what were great towns in those days.

Of Y'akûbi's biography but little is known. It would appear that he was born in Egypt, passed the earlier part of his life in Khurasân and

¹ A translation of this passage and of some others giving early notices of Jerusalem will be found in my paper in the *Quarterly Statement* for April, 1887.

the further east, and came back to spend his latter years on the banks of the Nile in the land of his birth.

5. Ibn al Fakih, the author of a very curious geographical miscellany, was a native of Hamadân, in western Persia, and flourished during the Caliphate of Al Mo'tadhid at Bagdad. He wrote his work about the year 903 A.D., but unfortunately we only possess it in the form of a somewhat arbitrary abridgment made by a certain 'Ali Shaizari, of whom little more is known than his name. Ibn al Fakih gives us a careful description of the Haram Area at Jerusalem, and is also, so far as I know, the first Arab author who notices the great stones at Baalbek, of which he notes the measurements.

6. The next name on the list is that of a Spanish Arab, Ibn 'Abd Rabbih, born at Cordova in 860, and died in the same city in 940. He composed an extremely interesting historical work, extending to three volumes in the Cairo printed edition, giving us details that are found nowhere else of the life and manners and customs of the pre-Islamic Arabs and others. The book is named "The Collar of Unique Pearls," and in it there is a chapter describing in great detail the appearance of the Haram Area at Jerusalem. Whether or not the author ever visited the Holy City I have been unable to discover; but if his description is not from his own observations he must at least have borrowed it from someone who was capable of making good use of his eyes.¹

7. Mas'ûdi is the author of the most entertaining historical work to be found in the whole range of Muslim literature. His "Meadows of Gold" begin with the Creation, and tell us all the Arabs knew of universal history down to the year 943, when the work was written. Mas'ûdi was born in Bagdad towards the end of the eighth century of our era. In his youth he travelled widely, visiting Multân and India, and passing through Persia a second time on his way to India and Ceylon, whence he returned to Bagdad *viâ* Madagascar. He travelled through Palestine in 926, and spent some time at Antioch; then went and settled in Egypt about the year 955, where he died a year later, at Fostat, now called Old Cairo. Spread up and down his numerous volumes of historic lore are many geographical notes, which are of considerable value, especially when it is remembered the early period at which the author wrote, his powers of observation, and his great learning.

8, 9. The names of Istakhrî (wrote 951) and Ibn Haukal (wrote 978) must be taken together, for the latter, who is by far the better known of the two, only brought out an emended and somewhat enlarged edition of the work of the former, giving it his own name. We have here to deal with the first systematic geography of the Arabs. It is not a mere road book, such as was Ibn Kirdâbih's, or a revenue list, as Kudamah's, but a sober description of each province in turn of the Muslim Empire, with its chief cities and notable places. Istakhrî, a native of Persepolis, as his name implies, wrote his book to explain the maps that had been drawn

¹ See the translation in *Quarterly Statement* for April, 1887.

up by a certain Balkhi, about the year 921, which maps are unfortunately not extant. Of Istakhrî and Ibn Haukal all that we know is that they were both by trade merchants, and that they travelled far and wide in the pursuit of commerce. All further biographical details are wanting.

10. Of Mukaddasi I need say little here, having already given details of his life and work in the preface to my translation of his account of Syria and Palestine, recently published by the Palestine Pilgrims' Text Society. He wrote in 985, and his description of the Holy Land and its cities is the more valuable from his being himself a native of Jerusalem, as indicated by his name, Al Mukaddasi, the Hierosolymite.

11. Rather more than half a century later than Mukaddasi, and about half a century before the first Crusade, the Persian traveller, Nâsir-i-Khusrau, passed through Palestine on his way to Mecca. He was in Jerusalem in 1052, and his description of the Holy City and the Haram Area is most minute, and extremely valuable, as being the last we have of the holy places before the coming of the Crusaders. Further details I need not give here, since before long I hope to bring out a translation from the Persian original of the Palestine section of his diary, to be included in the same series that has published Mukaddasi. The British Museum possesses a minute but very beautiful MS. of his work, and by its aid I have been able, I think, to emend many of the obscure passages in the edition of the French *savant*, M. C. Schefer.

12. The geographer, Idrisi, is perhaps better known in the west than any other Arab writer on this subject. As long ago as 1592 the text was printed in Rome. His geography was written in 1154, at the request of the Norman king, Roger II, of Sicily, at whose court he resided. Idrisi was born at Ceuta, but of Spanish Arab parents. He travelled much, for he relates that he has seen the English and French coasts, and has lived at Lisbon. His description of Palestine is excellent, and that of Jerusalem in particular is interesting, for he wrote of it as it was during the occupation of the Crusaders. It would not, however, appear that he himself visited the Holy Land, and his information, therefore, must have been derived from the accounts that he obtained at the Court of Roger from books, and from those who had travelled in that country.

13. Another Muslim who has left us a description of sites in Palestine during Crusading times is 'Ali of Herat, who wrote in 1173 a small work on "The Places of Pilgrimage." Its most interesting section is that describing Hebron, wherein he gives an account of a visit to the Cave of Machpelah.¹ 'Ali of Herat, though of Persian origin, wrote in Arabic. The text of his work has not, as far as I know, ever been printed; but the Bodleian possesses a good MS. copy. 'Ali died at Aleppo in 1215.

14. In 1185, two years before Saladin reconquered Jerusalem, the northern part of Palestine was visited by the traveller Ibn Jubair, a Spanish Arab, born at Valencia in 1145. Ibn Jubair set out on his

¹ I have given a translation of Yakût's version of the story in my paper on Suyûtî.—J.R.A.S., vol. xix, 1887, April.

travels from Granada in 1183; he came first to Egypt, went up the Nile, and then across the desert to Aidhab, on the Red Sea, whence he reached Mecca, and subsequently Medina. Thence he crossed Arabia to Kufah and Bagdad (of which he has left a most interesting account), and travelling up the Tigris bank, crossed from Mosul to Aleppo, travelled down to Damascus (of which he has also given a detailed description), and thence on to Acre, where he took ship, and ultimately landed again on Spanish soil at Carthage in 1185. Unfortunately for us he did not visit Jerusalem. He made two other journeys to the East subsequent to the one above mentioned, and on the return journey died at Alexandria, in Egypt. His description of the places he saw is lively and exact, although from the ornate style in which he wrote a literal translation of his diary would be tiresome reading.

15. For the immense extent of his labours and the great bulk of his writings Yakût has certainly the first rank among Muslim geographers. By birth a Greek and a slave, he was brought up and received a scientific education at Bagdad, in his master's house, who was a merchant. The details of his biography would take too long to recount here; suffice it to say that at various periods of his wandering life he sojourned at Aleppo, Mosul, Arbela, and Marv, and that he fled from this latter city (in those days renowned for its numerous libraries) in 1220 on the advent of the armies of Jenghis Khân. Travelling across Persia and through Mesopotamia, he ultimately reached Syria, and settled down at Aleppo, in which city he died in 1229. His great geographical lexicon, which describes in alphabetical order every town and place of which Yakût could obtain any information throughout the many kingdoms of the Muslims, was completed in the year 1225. It is a storehouse of geographical information, the value of which it would be impossible to over-estimate, and since no translation has ever been attempted of the articles therein relating to Palestine and Syria I hope to bring to light much that is new by giving an English version of what the great geographer has to say about the cities and sites of the Holy Land.

After the days of Yakût there is indeed very little new to be learnt from the Arab geographers.

16. Dimashki, born in 1256 at Damascus (as his name implies), wrote about the year 1300 a very jejune description of his native land. He was a contemporary of Sultan Bibârs, and his work is of some value in connection with the Crusading Chronicles. He died at Safed in 1327.

17. His contemporary, Abu 'l Fidâ, some time Prince of Hamâh, and a collateral descendant of the great Saladin, is a geographer of far higher merit. His chapter on Syria and Palestine is for the most part not copied from books, for as he is describing his native country he writes from personal observation. The work was completed in 1321. Abu 'l Fidâ himself was born at Damascus in 1273. He lived under the Mamlûk Sultans Kalaun, Lajûn, and Malik en Nâsir, and was made Governor of Hamâh in 1310, in which city he died in 1331.

18. Ibn Batûtah, the Berber, may well take rank with the Venetian,

Marco Polo, for the marvellous extent of his journeyings. He was born at Tangiers about the year 1300, and at the age of twenty-five set out on his travels.

Of these he has left us a full description, written in the year 1355. His route in the barest outline is all that can be indicated in this place. Starting from Morocco he visited in succession Tunis, Tripoli, and Egypt; going up through Palestine and Syria, he accompanied the Hajj to Medina and Mecca, went thence on through Mesopotamia to Persia, and returning, spent some months, first at Bagdad, and subsequently at Mosul. From Mosul he went again to Mecca, and from there travelled through Yemen, and so back to Egypt. From Egypt he took ship for Asia Minor, and afterwards visited Constantinople, the Crimea, Astrakhan, Khârizm, Tartary, Transoniana, Afghanistan, and finally reached India, where he spent a considerable time at Delhi. From India he sailed to the Maldive Islands and Ceylon, taking them on his way to China; and on the return journey visited Sumatra. After long voyaging he again found himself at Mecca, and from the Holy City took his way home to Fez *viâ* the Sudan and Timbuctoo. He subsequently visited Spain; and died at Fez, at an advanced age, in the year 1377.

Ibn Batûtah's account of what he saw in Palestine is extremely curious, and his description of Jerusalem goes into considerable detail. Possibly it might be worth while to translate his Palestine route *in extenso*, and give it in the form of one of the "Pilgrims."

19, 20, and 21. The last three names on the list are those of the Jerusalem Topographers. The earliest of them, the author of the much quoted "Muthîr al Ghirâm"—which only exists in MS.—wrote in the year 1351.

His work forms the foundation of the description of Jerusalem, written in 1470 by Shams ad Dîn Suyûtî,¹ and lastly, Suyûtî *plus* the "Muthîr" has been incorporated by Mujîr ad Dîn, chief judge of the Holy City, in the detailed description he has given us of Jerusalem, written a quarter of a century later than Suyûtî, in the year 1496. From a topographical point of view these three taken together correct one another, and the last of them describes the sites of Jerusalem very much as they stand at the present day.

A few words must now be added in conclusion to indicate the method it is proposed to follow in the work I hope, before very long, to lay before the subscribers to the Palestine Exploration Fund. A first chapter therein will be devoted to a general account—as found in the various Arab geographers—of Palestine and Syria; giving the political divisions of the country at various epochs, its products and peculiarities, its commerce, and, in short, all details that are of a general order. Next in place, as being by far the most voluminous, I propose to give the article on Jerusalem. It will contain a careful translation, with the needful notes,

¹ See J. R. As. Soc., April, 1887, for a full account and translation of the more important parts of his work.

of all that the Arab geographers have reported of the Holy City and its buildings. The descriptions of such travellers as Nâsir-i-Khusrau and Ibn Batûtah, as found in their diaries, will be here translated *verbatim*.

Special attention will, of course, be paid to the due arrangement in chronological order of the descriptions that have come down to us, of the buildings of the Dome of the Rock, and Aksa Mosque, and the Church of the Holy Sepulchre, in order that the history of these buildings, *during the last thousand years*, may, by the testimony of contemporary writers, once and for all, be set at rest.

Following the chapter on Jerusalem will come one that will give the various accounts of Damascus. After these two, I propose to arrange under the place names in alphabetical order everything that I have been able to gather from the above enumerated authors, concerning each of the several towns and sites in Palestine and Syria. Some of the articles will naturally be confined to a few lines; others, such as those dealing with Hebron, Tiberias, the Dead Sea, the Sea of Galilee, &c., will contain a considerable amount of translation.

Lastly, I propose to add a classified "road book" of the distances between the various towns, as given by the geographers (citing the authority for each), since by this means we are often enabled to identify sites of places now gone to ruin, and further, we gain an idea of the extent of traffic along these high roads during all the centuries of the middle ages. A full index will, as a matter of course, be added, and as an introduction, a chronological table, for reference, of the various dynasties that have held sway in Palestine, from the first Arab conquest down to its last conquest by the Turkish Sultan, Selim I, in 1518.

Maps and plans of the various edifices described will also be inserted, as required, to elucidate the text.

Of the translations from the Arabic, I should say that in every case they will have been made by myself from the original texts, printed or MS. Among the score of authors enumerated above, some few have been already translated (in part or in whole) into Latin, French, or German. Of previous translations I shall of course make my use, and take profit at the same time by the notes the editor, or translator, may have added to his text. A full bibliographical list of the texts used will be given, and in this it will doubtless be a matter of surprise for some, to note that of these score of Arab geographers, only one has been edited (untranslated, in the Arabic text) by an Englishman, and only one has been translated into English, and that, unfortunately, after a fashion that renders it utterly unreliable for any purposes whatsoever.

GUY LE STRANGE.

IDRÎSÎ'S DESCRIPTION OF JERUSALEM IN 1154.

IN connection with Professor Hayter-Lewis' excellent paper on the Aksa Mosque (see *Quarterly Statement* for January, 1887), the following translation of Idrîsî's description of Jerusalem in the year 1154 may be found of interest. Idrîsî wrote at a time when Jerusalem was still in the possession of the Crusaders.

My translation is made from the Arabic text printed by J. Gildemeister (*Zeit. des Deutsh. Pal. Ver.*, Band 2, Heft 2, 1885), from a MS. copy lent to him by the Dutch Orientalist, de Goeje, which had been carefully collated with the MS. preserved in Paris and at Oxford.

GUY LE STRANGE.

The Holy City.—Baît al Mukaddas, a beautiful city of ancient foundation, lasting for ever. It was anciently called Iliyâ (Ælia). It stands on a mountain, and you ascend to it from all sides. In plan it is long, and its length stretches from west to east.

Bâb al Mihrâb¹ is on its western side; and this is the gate over which is the Cupola of David, Kubbat Dâûd—peace be upon him.

Bâb ar Rahmah² is on the eastern side of the city. It is closed, and is only opened at the Feast of Olive-branches (Palm Sunday).

Bâb Silhyûn (Sion Gate) is on the south of the city.

Bâb 'Amûd al Ghurâb (the Gate of the Crow's Pillars)³ lies to the north of the city.

When you enter (Jerusalem) by the (Jaffa Gate) Bâb al Mihrâb, which as aforesaid is the western gate, you go eastwards through a street that leads to the great church known as the Kanisah al Kayâmah (the Church of the Resurrection), which the Muslims call Kumâmah (the Dughill). This is a church to which pilgrimage is made from all parts of the Greek empire, both from the eastern lands and the western. You may enter (the Church) by a gate at the west end,⁴ and the interior thereof occupies the centre space under a dome which covers the whole of the church. This is one of the wonders of the world.

The church itself lies lower than this gate, but you cannot descend thereto from this side.

Another gate opens on the north side,⁵ and through this you may descend to the lower part of the church by thirty steps. This gate is called Bâb Santa Maria.

¹ The Gate of the Oratory (of David), *i.e.*, the Jaffa Gate.

² The Gate of Mercy. One half of the so called Golden Gate.

³ The "Damaseus Gate" is at the present day known as Bâb al 'Amûd, "the Gate of the Pillar," what the "Crow" was I know not.

⁴ No longer, I believe, in existence.

⁵ Also closed at the present day by external buildings occupying the part north of the "Aisle of the Church of the Crusaders."

When you have descended into the interior of the church you come on the most venerated Holy Sepulchre. It has two gates, and above it is a vaulted dome of very solid construction, beautifully built, and splendidly ornamented. Of these two gates, one is toward the north, facing the gate Santa Maria, and the other is toward the south, facing which is the Bâb as Salûbiyyah (the gate of the Crucifixion). Above this gate is the bell-tower¹ of the church.

Over against this,² on the east, is a great and venerable church, where the Franks of Ar Rûm (which is the Greek Empire) have their worship and services. To the east (again) of this blessed church, but bearing somewhat to the south, is the prison in which the Lord Messiah was incarcerated ; also the place of the Crucifixion.

Now as to the great dome (over the Church of the Resurrection), it is of a vast size, and open to the sky. Inside the dome, and all round it, are painted pictures of the Prophets, and of the Lord Messiah, and of the Lady Maryam, his mother, and of John the Baptist. Over the Holy Sepulchre lamps are suspended, and above the Place (of the Grave) in particular are three lamps of gold.

On leaving the great Church (of the Resurrection) and going eastwards, you come to the holy house built by Solomon, the son of David. This, in the time of the Jews, was a mosque (or house of prayer) to which pilgrimage was made, but it was taken out of their hands and they were driven from thence ; but when the days of Islam came, under the Kings of the Muslims, the spot came once more to be venerated, as the Masjid al Aksa.

The Masjid al Aksa is the great mosque (of Jerusalem), and in the whole earth there is no mosque of greater dimensions than this ; unless it be the Friday Mosque at Cordova, in Andalusia, which they say has a greater extent of roof than has the Aksa, but the court of the Aksa Mosque is certainly larger than is that of the mosque at Cordova.

(The Haram Area of) the Masjid al Aksa is four-sided, its length measures 200 fathoms (*ba'*), and its breadth is 180 fathoms.

In that half (of the Haram Area) which lies (south) towards the Mihrâb (or prayer-nich) is (the main building of the Aksa Mosque), which

¹ Written in the Arabic *Kanbinâr*, Campanarium. This would go to prove the Tower of the Church of the Resurrection to be older than M. de Vogüe supposes (judging it on architectural grounds only), in his *Eglises de la Terre Sainte*, p. 207. The great south portal of the Church, the only one at present in use, and immediately to the north of which stands the Bell Tower, is the one, as I take it, here called the "Gate of the Crucifixion." It is noteworthy that in Idrisî's days the Church had three entrances, the one just mentioned, to the south ; one opposite, opening north (Gate of Santa Maria), and the West Gate, from which you could *not* descend into the body of the edifice.

² The Arabic has "opposite to her," *i.e.*, the Church of the Resurrection as I understand it. The Church of the Greeks is, I imagine, the present Catholicon, lying immediately east of the Rotunda of the Sepulchre, and to the present day belonging to the Greek community.

is roofed with domes of stone set on many rows of columns. The other half (of the Haram Area) is an (open) court, and is not roofed over.

In the centre of the (court of the) mosque rises the mighty dome known as the Kubbat as Sakhrāh (the Dome of the Rock).

This dome is overlaid with gold mosaic, and is of most beautiful workmanship, erected by the Muslim Khalifs. In its midst is the Rock (the Sakhrāh), which is said to have fallen down (from heaven). It is a mass of stone of the height of a platform, and occupies the centre under the dome.

The extremity of one of its sides rises above the floor to half a man's height or more, while the other side lies even with the ground. The length of the rock is near to equal with its breadth, and is some ten ells (*dhirā'*) and odd by the like. You may descend into the interior thereof, and go down into a dark chamber, like a cellar, the length of which is ten ells, by five in the width, and the ceiling is above a man's height up. No one can enter this chamber except with a lamp to light him.

The Dome (of the Rock) has four gates. The western gate has opposite to it an altar whereon the Children of Israel were wont to offer up their sacrifices.¹ Near the eastern gate of the dome is the church which is called the Holy of Holies ;² it is of an admirable construction.

(The gate) to the south faces the roofed-in portion (which is the main building of the Aksa), which same was in former times the place of prayer of the Muslims. Since (the Holy City) was conquered by the Greeks (*i.e.*, the Crusaders), and it hath remained in their hands even down to the time of the writing of this book (in the year 1154 A.D), they have converted this roofed-in portion (which is the main building of the Aksa) Mosque into chambers wherein are lodged those companies of men known as Ad Dâwiyyah (the Templars), whose name signifies "Servants of God's House." Opposite to the northern gate (of the Dome of the Rock) is a beautiful garden, planted with all sorts of trees, and round this garden is set a colonnade of marble, of most wondrous workmanship. In the further part of this garden is a place of assembly, where the priests and deacons are wont to take their repasts.

Leaving the mosque (and crossing the Haram Area) you come, on the eastern side, to the Bâb ar Rahmah (the Gate of Mercy), which is now closed, as we have said before ; but near to this gate is another, which is open. It is called Bâb al Asbât (the Gate of the Tribes), and through it there is much coming and going. When you have passed out by the Gate of the Tribes you reach the limits of the archery-ground, and find there a large church, and very beautiful, dedicated to the Lady Mary, and the place is known as Al Jismâniyyah (which is Gethsemane).

At this place also is her tomb, on the skirt of the Mount of Olives (Jabal az Zaitûn). Between it and the Gate of the Tribes is the space of about a mile.

¹ What this was I am unable to discover.

² This must be the present Dome of the Chain, *Kubbet as Silsileh*.

On the road ascending the Mount of Olives is a magnificent church, beautifully and solidly built, which is called the Church of Pater Noster ; and on the summit of the mount is another church, beautiful and grand likewise, in which men and women incarcerate themselves, seeking thereby to obtain favour with Allah—be He exalted ! In this aforementioned mount, on the eastern part, and bearing rather to the south, is the tomb of Aġazar (Lazarus), whom the Lord Messiah raised again to life. Two miles distant from the Mount of Olives stands the village from which they brought the she ass on which the Lord Messiah rode on his entry into Jerusalem. The place is now in ruins, and no one lives there.

From the Tomb of Lazarus you take the road down to the Valley of the Jordan (*Wādi al Urdunn*), and between the valley and the Holy City is the distance of a day's journey. Before reaching the River Jordan is the City of Jericho (Arihâ), lying three miles distant from the bed of the river.

On the banks of the Jordan stands a magnificent church, called after Saint John (Sant Yûhannâ), where the Greek monks dwell.

The River Jordan flows out from the Lake of Tiberias (Buhairah Tabariyyah), and falls into the Lake of Sodom and Gomorah (Buhairah Sâdûm wa Ghâmûrâ), and these were two cities of the people of Lot which God overwhelmed because of the sins of their inhabitants. The land lying to the south of the River Jordan is one continuous desert.

Now as to what lies adjacent to the Holy City on the southern quarter:—When you go out by the Bâb Sihyûn (the Gate of Sion) you pass a distance of a stone's throw and come to the Church of Sion, which is a beautiful church, and fortified. In it is the guest-chamber wherein the Lord Messiah ate with the Disciples, and the table is there remaining even unto the present day. The people assemble here (for the Festival of Maundy) Thursday.

From the Gate of Sion you descend into a ravine called Wâdî Jahan-num (the Valley of Gehenna). On the edge of this ravine is a church called after the name of Peter, and down in the ravine is the 'Ain Sulwân (Spring of Siloam), which is the spring where the Lord Messiah cured the infirmity of the blind man, who before that had no eyes. Going south from this said spring is the field (al Hakl, Aceldama ?) wherein strangers are buried, and it is a piece of ground which the Lord bought for this purpose (!) ; and near by to it are many habitations cut out in the rock wherein men incarcerate themselves for the purposes of devotion.

Bethlehem (Bait Lahm) is the place where the Lord Messiah was born, and it lies six miles distant from Jerusalem. Half-way down the road is the tomb of Rachel (Râhil), the mother of Joseph and of Benjamin, the two sons of Jacob—peace be upon them all. The tomb is covered by twelve stones, and above it is a dome vaulted over with stone. At Bethlehem is a church that is beautifully built, of solid foundations, spacious and finely ornamented even to the uttermost, so that not among all other churches can be seen its equal. It is situated in a low-lying ground. The gate thereof is towards the west, and there are (in the

church) marble columns of perfect beauty. In one angle of the choir (*al haikal*), towards the north, is a cave wherein the Lord Messiah was born. It lies below the church, and in the cave is the manger wherein the Messiah was found. As you go out from Bethlehem you see towards the east the church of the Angels who told the good news of the birth of the Lord Messiah to the shepherds.

THE PILGRIMAGE OF THE ABBOT DANIEL.¹

RUSSIAN pilgrimages to the Holy Land date from the conversion of the Russians to Christianity towards the close of the tenth century. As early as 1022 A.D. allusion is made, in the life of St. Theodosius of Kiev, to the presence of Russian pilgrims in Palestine; but the first whose name is known is St. Varlaam, Abbot of the Laura of Kiev, who visited Jerusalem in 1062 A.D. The earliest extant record of a Russian pilgrimage to the Holy Land is that of Daniel, the Abbot, or Prior (*Ἡγούμενος*), of a Russian monastery, of whom nothing certain is known. It may be inferred from Daniel's reference to the river Snov, as a stream that possessed several of the characteristics of the Jordan, that he came from the province of Tchernigov, in Little Russia, through which the Snov runs; and he is supposed to have been the same Daniel who was Bishop of Suriev in 1115 A.D., and who died the 9th September, 1122 A.D.

Daniel was a contemporary of Nestor, the oldest of the Russian annalists, and his narrative is one of the most important Russian documents of the commencement of the twelfth century; its intrinsic merits seem to have made it extremely popular, and there are no less than 75 MSS., of which the earliest dates from 1475 A.D. The date of the pilgrimage can be fixed with considerable certainty from Daniel's own statements. He mentions the Russian Grand Duke Michel Sviatopolk Isiaslavowitsch (1093-1113), and Baldwin, King of Jerusalem (1100-1118); he also states that Acre belonged to the Franks, and as this city was taken by the Crusaders on the 26th May, 1104, the date must lie between 1104 and 1113. A closer approximation is, however, possible. Daniel tell us that he accompanied Baldwin on his expedition against Damascus, and M. H. Hagenmayer has shown (*"Ekkehardi Urangiensis abbatis, Hierosolymita,"* Tub 1876, pp. 360-362) that this expedition must have been one of those undertaken by the king between 1106 and 1108. Again, Daniel speaks of the attacks to which pilgrims were exposed from the Saracens of Ascalon; and William of Tyre mentions one of these attacks on Christians passing from Jaffa to Jerusalem, which took place in the year 1107 (*"Des choses avenues en la terre d'Outremer,"* xi, 4, Paris, 1879, vol. i, 384). Lastly, it will be observed that, in the very minute description which Daniel gives of the

¹ This tractate forms the latest issue of the Palestine Pilgrims Text Society.

ceremony of the "Holy Fire," no allusion is made to the Latin patriarch, and that one of the bishops takes the place that Fulcher de Chartres assigns to the patriarch. Now, we know that there was no Latin patriarch at Jerusalem during Easter, 1107, for Dagobert left the city in 1103, and Ebremar, his substitute, started for Rome towards the end of 1106. The Easter week which Daniel passed at Jerusalem must therefore have been that of 1107, and his pilgrimage was probably made during the years 1106-1107 A.D.

The wide field which Daniel's narrative covers—wider than that of any previous pilgrim—its fulness of detail, the light that it throws on the condition of the country a few years after its conquest by the Crusaders, and the evident good faith in which it is written, give it an importance and value that have not, hitherto, been sufficiently recognised. Daniel travelled extensively in Palestine west of Jordan; he visited most of the sanctuaries, holy places, and monasteries, and, having provided himself everywhere with the best guides, he wrote down a minute description of all he saw. According to his own account (p. 73) he described nothing that he did not see with his own eyes, and this is supported by the internal evidence of the narrative, for when he cannot visit a place, he frankly admits that he is dependent upon others for his information. Incidentally the Russian Abbot throws some curious light on the unsettled state of the country, and the dangers to which travellers were exposed, on the roads, in the earlier years of the Latin kingdom. At Lydda, on the high road from Joppa to Jerusalem, pilgrims pass the night in great fear of raiding Saracens from Ascalon; brigands frequent the road from Jerusalem to Jericho; on the forest-clad hills near Solomon's Pools, Saracen bands from Ascalon lie in wait for those journeying from Bethlehem to Hebron; the mountains south-east of Bethlehem are so full of brigands that Daniel and his companions have to travel under the protection of a Saracen chief. No one can proceed from Jerusalem to the Sea of Galilee without an armed escort; the Saracens of Beisan attack travellers as they ford the streams; impious Saracens massacre Christians going from Mount Tabor to Nazareth; and Lebanon cannot be visited on account of the infidels. We learn, too, that panthers and wild asses still found a home in the Wilderness of Judæa; and that lions in large numbers frequented the jungle in the Jordan Valley; whilst the date-palm, which has since disappeared, flourished in the semi-tropical climate of Jericho and Beisan.

Daniel's narrative derives additional interest from the fact that the writer was not only a member of the Russian (Greek) Church, but the abbot of a monastery, and, presumably, a man of some education and intelligence. It is written in a devout, believing spirit, such as might be expected in a Greek priest, and shows no trace of hostility towards the dominant Latin religion. Daniel was accompanied throughout his pilgrimage by a monk of the Greek Laura of St. Sabbas, "a very pious man of advanced age, who was well-versed in the Scriptures;" and he was a welcome guest at the numerous Greek monasteries throughout the country. His traditions are those of the Eastern Native Church, referred to by Sæwulf

and others as Assyrian or Syrian traditions ; he is evidently well acquainted with the Apocryphal Gospels in their Greek forms, and he quotes from the Protevangelium of James, whence several of the traditions are derived. The relations between the Greek and the Latin Churches in Palestine appear to have been most friendly at this period, and the deference paid by the King of Jerusalem to the Greek clergy and the monks of St. Sabbas is specially noteworthy. The Greeks have charge of the Church of the Holy Sepulchre, and keep the keys of the Sepulchre gate ; and during the Easter ceremonies the Greek lamps are placed on the tomb itself, whilst those of the Latins are suspended above it. The description of the descent of the Holy Light, or Fire, agrees in all essential particulars with that of Fulcher de Chartres (1101 A.D.), who was present on the memorable occasion when the Holy Fire did not kindle the lamps till Easter Sunday. Both writers describe the flame as being of a ruddy colour, and mention that all present joined in the Greek cry, "Kyrie Eleison." Daniel says that the Greeks and Latins read the service for Easter Saturday together ; Fulcher, that the Franks first read each lesson in Latin, and that the Greeks then read the same lesson in Greek. In the Frank account of the ceremony the patriarch is said to have opened the door of the tomb ; in the Russian, one of the Latin bishops ; a difference explained by the absence of the Latin patriarch at the time of Daniel's visit.

Daniel is on the whole fairly accurate, but he occasionally falls into error, and some of his blunders betray an ignorance of Scripture not very creditable to himself or to his guide, the learned monk of St. Sabbas. Geographical errors, such as the location of Capernaum on the sea coast near Carmel, the identification of Lydda with Ramleh, of Cæsarea Philippi with Kaisariyeh (Cæsarea Palæstina), of Samaria with Nâblus ; and of Bashan with Beisân ; and the statement that Decapolis was a town, may be set down to the general ignorance of the period. There are other blunders, however, for which far less excuse can be made, such, for instance, as the quaint account of the battle near Jericho, during which the sun stood still whilst Joshua conquered Og, King of Bashan ; the statement with regard to events said to have taken place at Beisân (p. 60), and the manner in which Mark i, 16-18, is mixed up with i, 19, 20 (p. 64). Little dependence can be placed on the distances and dimensions given in the text, the old Roman itineraries had fallen into disuse, and the former are only approximate, whilst the latter are in most cases erroneous either from corruption of the text or from having been hastily written down from imperfect information. In giving the direction of a place, Daniel usually refers to the position of the sun at the winter or summer solstice, which seems almost like a reminiscence of the remote days, when pointer stones were set up to mark the sun's furthest deviation north and south, and general rejoicing announced the day when the point of sunrise commenced to return northwards.

Daniel commences his itinerary at Constantinople whence he went by sea to Jaffa, visiting on the way Ephesus, Cyprus, and several other places. His voyage appears to have been uneventful ; he carefully par-

ticularises the localities where various saints and holy men were buried ; mentions the "holy dust" that rises each year from St. John's tomb, and the cross suspended in mid-air above Mount Trodos in Cyprus, and describes the way in which storax is collected on the mountains of Lycia. From Jaffa he travelled by Lydda, which he found deserted ; and Nebi Samwíl, identified with Armathem (Ramathaim Zophim), to Jerusalem. On the brow of Mount Scopus, in full view of the Holy City, he dismounted to pray, and then, full of exceeding joy, proceeded on foot past the church and tomb of St. Stephen to the present Jaffa Gate where, under the shadow of the citadel, all travellers entered Jerusalem during the rule of the Franks.

The Abbot took up his abode in the Metochia, or "Pilgrim House" of St. Abbas, near the Tower of David, which was then occupied by Greek monks who had escaped from a recent massacre at the better known Laura of St. Sabbas, now Mar Saba. Under the guidance of a monk of the Laura he visited the holy places, and his description of their condition before the Franks carried out any extensive building operations is of much interest. His narrative is fuller than that of Sæwulf, who visited Jerusalem four or five years before him, and he mentions several minor "holy places," such as the "Pit of Jeremiah," the "House of Uriah," and the compounds of Judas and Paul, which are not noticed by the Anglo-Saxon pilgrim. The description of the Church of the Resurrection, the Holy Sepulchre, and the group of holy places round it, is discussed in Appendix II ; that of the Church of the Holy of Holies, now the "Dome of the Rock," is chiefly noteworthy for the statement that the building was the work of a Saracen chief named Amor, evidently a corruption of the name of Omar, the conqueror of Jerusalem. The legends gathered round the tomb of the Virgin in Cedron, and the church on Mount Sion, which was supposed to be the house of St. John the Evangelist, are detailed at some length, and they afford an interesting illustration of the class of information given by the Jerusalem guides of the early part of the twelfth century to pilgrims who belonged to the Eastern Church.

From Jerusalem Daniel made two excursions : the first to the Jordan and Dead Sea, during which he visited Jericho, and the Greek monasteries in the Jordan Valley, and the Wilderness of Judæa ; the second to Bethlehem, Hebron, where the Crusaders had not yet built their church, and the monastery of St. Chariton. After returning to Jerusalem from Hebron he obtained permission from Baldwin to accompany the force which was about to march against Damascus under the leadership of the king himself. The route followed by the troops seems to have been by Bíreh, Lubbán Náblus, and Teisáir to Beisán, where some of the events connected with our Lord's life, including the healing of the two blind men, are localised. From Beisán the army marched to two bridges near the sources of the Jordan, which, according to Daniel, were two streams called Jor and Dan, that flowed from the Sea of Tiberias. The bridges appear to have been, that close to the point at which the Jordan now leaves the lake, of which traces can still be seen, and that known as the Jisr es Sidd, now in ruins, a

little below the junction of the two streams, "Jor and Dan," which then ran out of the lake and made an island of Kerak. The only other known site of a bridge is that of the Jisr Mujámiâ, a short distance lower down the river; but in that case we should have to suppose that the Jordan and the Yarmuk were the two streams mentioned. When Baldwin crossed the Jordan, Daniel went on to Tiberias, and spent ten days in visiting the holy places on the borders of the Sea of Galilee; he does not appear to have been able to leave the immediate vicinity of the lake, and was only able to see the environs of the Baheiret el Húleh, which he identifies with the Lake of Gennesareth, from a distance. According to the Russian Abbot the Jordan commences at its exit from the Sea of Tiberias, and he notices that portion of it above the lake merely as a large river flowing out of the Lake of Gennesareth. From Tiberias, Daniel went to Mount Tabor, where he heard the curious legends connected with the cave of Melchisedek; Nazareth, where the Latins had already firmly established themselves; Cana of Galilee, and Acre. After resting four days at the last place, he journeyed southwards by Haifa and Kaisariyeh to Náblus; and so on by Bethel to Jerusalem.

After witnessing the ceremony of the descent of the "Holy Light," in the Church of the Resurrection, on Easter Saturday, 1107 A.D., the Russian pilgrim commenced his homeward journey. He travelled by the Convent of the Cross; 'Ain Kárim, the home of Zacharias, and the birth-place of John the Baptist; and 'Amwás, which has been laid waste by the infidels, to Jaffa; and thence by Arsúf, Kaisariyeh, Haifa, Tyre, and Sidon, to Beirút. Whether he embarked at Beirút or at Suédiah, the port of Antioch, is uncertain; but in either case he followed the coast pretty closely, and after having been robbed by pirates, off the Lycian Coast, near Patara, eventually reached Constantinople in safety.

NOTES ON THE *QUARTERLY STATEMENT*.

THE Statement for October, 1887, shows that the work of the Palestine Exploration Fund is not falling off. Mr. Petrie's valuable casts have convinced Dr. Taylor (and I believe Dr. Sayce) of the existence of a Turanian element in Egypt, and of the Mongol origin of the Hittites. But these are not new ideas. As regards Egypt, we may refer to Rev. H. G. Tomkins's drawings in the "Life and Times of Abraham." As regards the Hittites, the late Dr. Birch, in 1882, pointed out from Rosellini's drawings the Mongolian character of the Hittites, and after seeing these beautiful designs I published my adherence to this view in 1883 in "Heth and Moab." The basis of my Hittite theory is thus accepted at length by many competent authorities.

The great Sidon find is illustrated by many known antiquarian facts. The horse led in procession (p. 202) recalls the horses in Etruscan tombs.

Horses were sacrificed at tombs in many parts of Europe and Asia, the horse sacrifice in India being reckoned of primary value next to that of human beings. The griffins and sphinxes are common to Akkadians, Babylonians, Egyptians, Phœnicians, Greeks, and Etruscans. Dogs seem to have had special importance, among the Phœnicians as among the Zoroastrians, but dogs' skulls have been found in Etruscan tombs. The fawn for which the centaurs contend might be connected with the fawns torn in pieces in honour of Dionysius. The water libations recall the common custom of pouring out water at funerals, or upsetting it on the occurrence of a death (compare the idea mentioned by Shakespeare of death depending on the tide). Perhaps the rite was symbolic of the ebbing life. The colouring of the sculptures indicates perhaps an early date, though painted tombs occur in Byzantine times. There are many painted figures in Phœnicia, and the early statues found recently at Athens were painted. So were early Greek temples, while the painted tombs of Egypt and of Etruria hardly need to be recalled. It seems to me that the chambers *above* the chief interment are not likely to be later than the lower tomb, but the sarcophagi may of course have been placed there afterwards. Anyhow, the cemetery is as early as the Persian period. The fish-scale ornament of the lids has been noticed in several cases in Palestine and beyond Jordan. The find agrees with what is already known of the progress of Phœnician art. It is interesting to hear that the same ship bore to the Constantinople Museum a new Hittite text. Hamdi Bey, whom I have the pleasure of knowing, is the best curator the Museum has yet possessed, and the Turks will take care of the antiquities, the value of which they fully understand.

As regards the "boat-shaped graves" (p. 236), I think they should be compared with the anthropoid sarcophagi of Phœnicia, and with the wooden mummy cases in Egypt. The form follows that of the human body. The representation of the recumbent figure on the lid of sarcophagi developed, in Etruria, into a complete statue like those of mediæval monuments, save for the costume.

Lydda and Anti-Christ.—The legend of St. George at this place was fully treated some time back by M. Clermont Ganneau, but I quite believe it is founded on the old story common to Akkadians, Babylonians, Aryans, &c.

Page 238. Is it not rather an extreme view to say that the Greeks "borrowed their religious system from Egypt?" It is known that there is a greater Aryan element perhaps coming from the north, as Canon Taylor has pointed out at the last meeting of the British Association. There is also an element of Babylonian or Akkadian derivation, and a Phœnician element in the mixed mythology of Greece. Charon was probably not connected with Horus, but with the Etruscan Charun, "the black (or evil) god" of death.

Page 240. The name Baal Zephon can hardly be quoted as evidence, seeing that as early at least as 1600 B.C. there was a large Semitic element in the Delta. The Egyptian dictionary is full of Semitic words, as old as

the time of the Hyksos at least. The Phœnician influence in Egypt, before the Exodus, is an established fact generally allowed.

City of David.—I mean no disrespect to those who hold another view, and especially none to H. B. S. W. (by whose corrections I have often profited), when I say that the papers to which he refers seem to me to be inconclusive. I do not see any contradictions in the sentences of mine which he quotes. Perhaps they are obscure. I do not think Jerusalem was as large in David's time as in Hezekiah's, or as large in Hezekiah's as it afterwards became; but I think David's Jerusalem was larger than a fourth-rate Fellah village of our own times. I have expressed no opinions as to the dates of books of the Old Testament, but no scholar supposes the Book of Chronicles to be as old as the Book of Kings.

It is quite possible, of course, that I may be wrong as to the application of the term "City of David," but this remains a matter of opinion in the present condition of exploration in Jerusalem; and I have of late been very fully occupied with matters from which I think results of greater value may spring than would result, even if we all agreed how to understand this much debated term; Elizabeth, Bessy, and Bess (p. 252) are forms or corruptions of one word, but Zion, Ophel, Millo, and Akra do not appear to be forms of one word. Solomon's palace on Ophel was not in the City of David.

C. R. C.

THE MARASH LION.

IN the Proceedings of the Society of Biblical Archæology, Mr. Rylands has just given some excellent copies of the Hittite inscription on this lion from the cast in the British Museum. I differ in a few cases from his copy of certain forms, but anyone who has seen the cast will know how difficult it is to make sure of some of the forms on this very crowded text, and the copy, as a whole, is very reliable.

Mr. Rylands seems to regard the text on the left side as the only Hittite text in which the first line begins from the left, but the same is the case in the fourth Hamath stone, which there is every reason to regard as complete, and also probably in one of the texts at Ibreez.

Mr. Rylands does not attempt any decipherment, but it is encouraging to see, in his general remarks, the influence of the publication of "Altaic Hieroglyphs." He says the lion stood at a corner, and compares it with the great Assyrian lion standing close by. He also speaks of "compound emblems" as occurring in the text. These remarks will not, I believe, be found in any other work before my book was published. Mr. Rylands does not allude to the curious "included emblem," which is unique.¹

¹ These "included emblems" occur not only in cuneiform, but also in a good many cases in Egyptian; but in Hittite they seem very rare—another indication of the early character of the Hittite script.

His drawing of a demon head I have verified from the cast and find very correct. Speaking of the emblem accompanying the oft-repeated *altar*, he confuses, I think, two distinct Hittite signs, viz., C, which is usually a suffix, and IC, which is always a prefix. It is the first which is found so often attached to the altar, and which compound I read *Bar-d*, but the altar occurs without this suffix C = *d* (or *ak*), and when alone probably reads *Bar*.

C. R. CONDER

REPLY TO CAPTAIN CONDER'S NOTES ON ZION.

IF silence gives consent, the opponents of Ophel being the site of the City of David are convinced of their error, and it only remains for me briefly to notice Captain Conder's objections in *Quarterly Statement*, 1887, p. 105.

1. He asks, "Is it certain that the words City of David are always used with the same meaning" in the Bible. I answer, without hesitation, Yes, as no evidence placing it elsewhere than on Ophel has yet withstood investigation.

2. He takes "the field of burial of the Kings," "the Garden of Uzzah, near Solomon's Palace on Ophel," to be a different place from "the Tombs of the Kings of Israel," i.e., of David and other kings. Here are several mistakes.

a. The "field" and the "garden" were distinct places. For Manasseh was buried "in his house," or "in the garden of his house, in the garden of Uzzah." This house or palace was that built by Solomon near the Temple (within the "enclosure of Herod's Temple," "Handbook," 340), but "the Sepulchres of David," which Captain Conder (106) takes to be equivalent to this "field of burial," were not only, as he admits, on Ophel, but also between the Pool of Siloam and the pool that was made (Neh. iii, 15, 16), and so certainly not north of the Virgin's Pool. In other words, Manasseh's tomb was at the north end of Ophel, so called, and Uzziah's towards the southern side, so that the two localities were quite distinct.

b. Captain Conder admits that the field of burial where Uzziah was buried was on Ophel, but 2 Kings xv, 7, states that he was buried with his fathers in the City of David. Therefore the City of David was on Ophel, and my position is proved by Captain Conder himself. This mistake of his, which I pointed out six years ago (1881, 95), seems to show that "disputants retain their opinions," probably because they do not carefully examine the evidence bearing on the question under discussion, even to comparing Chronicles with Kings.

But further, Uzziah was buried with "his fathers." As all the kings after David and Solomon downwards to Uzziah, with only one exception,

are all said (see H. B. S. W.'s table, 1882, 266) to have been buried "with their fathers," we have a distinct Biblical assertion that they were all buried together in the same locality, though not all in the same sepulchres.

Therefore, *volens volens*, Captain Conder is forced to admit (if argument influences him) : 1, that David was as much buried on Ophel as was Uzziah, and (2) that the Sepulchres of David (Neh. iii, 16), need not mean anything else than the place where David was actually buried. The fact is the southern part of Ophel was the cemetery for good and bad kings alike down to the time of Manasseh.

3. When Captain Conder says that there is no doubt that Akra was west of the Temple, he makes a statement directly contrary to the whole testimony of Josephus, as I showed (*Quarterly Statement*, 1886, 26). Here, again, I must suppose that he has not read my remarks on his theory.

4. Captain Conder's energy seems to waste itself in opposing a theory which places David's capital on the little spur of Ophel. Let me say once for all, that (in these pages) no one has ever advocated such a theory. It is a chimera of Captain Conder's own invention. He has indeed attributed it to me and also to Professor Sayce, but both of us have distinctly repudiated it. My theory is, that even in the time of Joshua, Jerusalem occupied ground on both sides of the Valley of Hinnom (*i.e.*, the Tyropœon), being both in Judah and Benjamin, and therefore was not confined to Ophel, while Professor Sayce includes the temple hill in his Jerusalem of David's time, though wrongly, I admit. If, ceasing to fight with his own shadow, Captain Conder will turn his attention to the arguments of H. B. S. W., and to mine, perhaps we shall soon have the aid of his pen against other errors.

5. Captain Conder thinks that no engineer would be able to agree that a fortress could have stood on Ophel. I can forgive one of my cloth (Canon Tristram, 1885, 107 ; 1886, 34) falling into error on this point ; but, O ye heroes of Rorke's Drift, what think ye of a R.E. rejecting Ophel as indefensible, when with time and stone without stint, a position that with a wall of 50 feet high would not on any side be overtopped within 400 feet, is condemned off-hand as untenable ?

What, I ask, at a distance of 400 feet, had a stone fortress in David's time to fear from bows, slings, and javelins, and even all Jonathan's artillery ? The answer must be, Nothing.

6. Access to the Gihon spring, Captain Conder takes to have nothing to do with the position of the castle (of) Zion, as other fortresses were often far away from the nearest spring. Exactly so, and all the other fortresses in the mountains were accordingly captured, while Zion for four centuries remained secure, and was only at last taken by treachery. Even Antiochus the Great could not take Rabbath Ammon, until its water supply was cut off. In opposition to Captain Conder I may quote the words of Sir Charles Warren in 1879 : "The strongest point to my mind in favour of Ophel having been the ancient site of the Jebusite city is the fact of the one spring of water being found there. I have carefully noted the manner in which the Kafirs have located themselves close to water

in their various strongholds, and I think, that, unless there were very urgent reasons, the Jebusites would have located themselves near what is now called the Virgin's Fount."

It seems hardly fair that Captain Conder should bear the whole burden of fighting against the truth. Will none of those who hold somewhat the same opinions, as Canon Tristram and Sir C. Warren, or who spread his Jerusalem errors, as Mr. Henderson in his "Palestine," do justice to their views by trying to defend them in these pages? A little investigation would, I hope, reveal to them how greatly one is misled by taking Jerusalem sites on trust.

W. F. BIRCH.

THE CITY OF DAVID.

III. ZION, SOUTH, NOT NORTH OF THE TEMPLE.

FERGUSSON, followed by Thrupp (and Lewin partly), placed Zion rightly on the eastern hill, but wrongly north of the Temple.

Let me briefly point out the unsoundness of the arguments alleged in favour of this northern site.

1. He quotes Psalm xlviii, 2, "Mount Zion, on the sides of the north, the city of the great king." These words seem to me too ambiguous for any argument to be built upon them. Thrupp (Jerusalem, 19) refers to the Prayer Book version: "Upon the north side lieth the city of the great king," which, he adds, "may be taken as identical with the City of David." If Hebrew scholars will agree that the original words *must* mean that the city lieth on the north side of Mount Zion, and cannot mean that Mount Zion is on the north side of the city (as I interpret them), the supporters of the northern site are welcome to have this passage in their favour.

2. On this verse Fergusson quotes the Rabbis from Lightfoot as in his favour, but he errs with Lightfoot (as they are really against him), overlooking the distinction between *Zion*, the City of David, of the historical books of the Bible, and Mount Zion which always, in 1 Macc., means the Temple hill (xiv, 27, compared with 48), if not in the Bible.

Lightfoot, with Psalm xlviii, 2, compares Isaiah xiv, 13: "I will sit also upon the mount of the congregation (*i.e.*, Mount Zion) in the sides of the north," and Ez. xl, 2, "He set me upon a very high mountain, by which was as the frame of a city on the south." He then quotes the Rabbis thus: "Aben Ezra, Mount Zion is on the north side of Jerusalem; Lyranus, Mount Zion is in the north part of Jerusalem; Kimchi, the Temple, was to be built on a mountain as before, and the City of Jerusalem is near it on the south;" and Lyranus again, "the Temple was in the north part, but the city in the south part." Lightfoot, however, not observing the above distinction, adds, "Behold! reader, Zion (he ought

to have said Mount Zion) on the north, in the Psalmist, and the city on the south part, in the Prophet." Elsewhere, Lightfoot makes the same mistake: "The mountain of the Temple will be found lying northward of Jerusalem," and he adds, "and Zion northward of the mountain of the Temple." See also prospect of the Temple: "Mount Moriah, this mountain seated in midst of Jerusalem . . . on the south Jerusalem; on the north side lay Mount Zion."

Thus, while the Rabbis say that Mount Zion (*i.e.*, the Temple) was north of Jerusalem, and the city south of the Temple (*i.e.*, Mount Zion), and only refer to *two* places; Lightfoot goes wrong making *three* places out of the *two*, through not discerning that Mount Zion was identical with the Temple, as in 1 Macc.

Thus the appeal to the Rabbis is *against*, and not in favour of, the northern site for the City of David.

3. Thrupp says, "That the Acra of Antiochus (*i.e.*, the City of David, 1 Macc. i, 33) stood to the north of the Temple, can hardly admit of question. Josephus, who is a competent authority on this point, tells us that it overlooked, or rather, overlay the Temple." Unfortunately, however, for this argument Josephus shows that he is *incompetent*, for he contradicts 1 Macc. (his authority for these times), and makes Nicanor go *down* from the Acra to the Temple, although 1 Macc. says distinctly that he went *up*. This northern theory is simply baseless. I have shown that the Rabbis are not its friends but its foes; that when it rests on Josephus, he contradicts 1 Macc. vii, 33. For it to agree with the Bible, Neh. iii must be chopped into pieces and pieced afresh, and, according to Thrupp, "David" altered into "Solomon," in Neh. xii, 37.

But here, against Fergusson (Temple of the Jews, 53), I maintain that Neh. iii is an *orderly* (1879, 176) description of the wall. The order of the verses is as important as the order of figures in a sum. Against Thrupp (Jerusalem, 172) I maintain that the "the House of David" cannot mean the Palace of Solomon, which stood not on the south-western, but on the eastern hill, and with which David had nothing whatever to do.

Indeed, in his last book (Temples of the Jews), Fergusson is willing to accept Ophel as an alternative site for the Sepulchres of David which were in "the City of David," while Thrupp and Lewin are inclined to admit that this term afterwards extended to the part south of the Temple. For 2 Chron. xxxiii, 14, which Thrupp claims, I must refer the reader to *Quarterly Statement*, 1885, 104.

I have already proved directly that the City of David was south of the Temple (1885, 100, 208; 1886, 26). I must also now claim to have proved this by the exhaustive process, for as it has been shown that there is no proof that it was *west*, or *south-west*, or *north* of the Temple, it only remains for it to have been *south*, the only other possible site, and this has again and again been demonstrated to be the true site. Therefore Zion, the City of David, was on Ophel.

IV.—ZION, NOT JERUSALEM IN GENERAL, IN THE HISTORICAL BOOKS.

This broad view, which allows every site to be right, except the correct one, needs but little notice. It meant to make things pleasant all round, by telling each combatant his site was true, and could be proved by sound argument.

(1) As I have shown that there is no evidence for the western or south south-western or northern position for the City of David, while there is abundant evidence for the Ophel site, it is to be hoped we have heard the last of this greatest of imposters.

(2) It may be urged that the LXX in one passage substitutes Zion for Jerusalem (1884, 198), and that Josephus always substitutes Jerusalem for the City of David in speaking of the burial of the kings.

To this I would reply that Zion in the prophetic books often seems to be equivalent to Jerusalem, so that it might easily be interchanged for Jerusalem in the LXX, though possibly the translator in 1 Kings, viii, 1, may have made the change accidentally, or to show off his topographical knowledge.

Josephus, on the other hand, merely sacrificed precision by the alteration he made, and being perhaps perplexed thought this the best way out of his difficulty.

(3) It is urged that Josephus (Ant. VII, iii, 2) says that David called Jerusalem "the City of David." I ask—Whence did Josephus obtain this information? And if it is said he obtained it from 2 Sam. v, 9, then (in *Quarterly Statement*, 1886, 29) I showed how very far his paraphrase is from being true to his text.

I now claim to have proved beyond fear of refutation, that Zion, the City of David, was solely and entirely on Ophel.

Contradiction, without either argument or any attempt to meet the evidence I have brought forward, I take to reflect not on my theory, but on the intelligence of the opponent, as condemning a theory which he cannot upset.

To the map-makers I make my humble request that they will not for the future perpetuate a glaring and flagrant falsehood by ever writing the name, "the City of David," at Jerusalem, anywhere except on the hill south of the Temple.

W. F. BIRCH.

 NEHEMIAH'S NIGHT-RIDE.

THE topography of ancient Jerusalem is a very perplexing question, and in studying it, while nothing is more helpful than to compare the third chapter of Nehemiah with the twelfth, nothing is more vexing than to find that even the two accounts taken together are insufficient. They may, however, be supplemented, to some small extent, by Neh. ii. 13-15: "I went out by night by the valley gate, even toward the dragon's well,

and to the dung gate, and viewed the walls of Jerusalem, which were broken down, and the gates thereof were consumed with fire. Then I went on to the fountain gate and to the king's pool : but there was no place for the beast that was under me to pass. Then went I up in the night by the brook, and viewed the wall; and I turned back, and entered by the valley gate, and so returned."

I have always been inclined to fancy that Nehemiah left the city by the Jaffa gate, rode southward, made a vain attempt to ascend a re-entering angle at the Tyropœan valley, and retreating thence followed the brook Kedron northward, turned to the left at the N.E. corner of the city by the sheep gate, and thus got back to the Jaffa gate, after making the circuit of the city. But the valley gate may not be the Jaffa gate, and if Neh. iii, 13, means that the dung gate was only 1,000 cubits from the valley gate, it cannot be so. We have the dung gate bearing the same name still, and with the sewage flowing out near it. Taking this as a fixed point, the gate 1,000 cubits west of it is the gate of David. I will only assume, therefore, that Nehemiah left the city through some gate near the south-west corner. He then made towards the *dragon's well*. This we may probably identify with the Virgin's fountain, seeing that this fountain has been called the well of the dragon, and the well of the sun, and a common legend explains the intermittent flow of the water by declaring that a dragon lies within it who wakes and sleeps. When awake he stops the water, but when he sleeps it flows. (By the way, it seems worth remarking that in the myth of Cadmus the well of Ares was guarded by a dragon, which the hero killed.) Having come near to this well—towards it, but not unto it—Nehemiah bent his way northward to the dung gate. I conceive that the fountain gate and the king's pool, which he came to next, were situated in that part of the chine which is now within the city wall, and filled with *débris*. In Nehemiah's time it was so far from being filled that the entrance to the sepulchres of the kings was visible, and so far from being on a level with the ground east and west of it, that pedestrians in passing from one hill to the other had to make use of the stairs that went down from the City of David (see Neh. iii, 15 ; xii, 37).

Two or three things deserve mention here :—(1.) Such a re-entering angle appears to be required in order to find room for the length of the wall as indicated in Nehemiah's descriptions, for without this the many places mentioned will seem to be too crowded together. It is because there is such a sinus that the first company, in chap. xii, forsake the wall, and make use of the stairs of the City of David, after which they get on to the wall again. They may forsake the wall and take the short cut, either to reduce their journey to the same length as that of the second company, or possibly because that inner part of the wall was not broad enough to walk upon, or was not yet completely repaired.

(2.) The passages favour the idea that the City of David was on the eastern hill. The stairs "go down from the City of David," yet the

company goes up by those stairs in a journey which seems to begin somewhere near the Jaffa gate, and end at the Temple.

(3.) The obstruction to Nehemiah's progress seems to be accounted for by the nature of the spot. There being two walls running parallel to one another for some distance along the sinus, the destruction or dilapidation of both would result in double heaps of ruins in a narrow space.

(4.) It will be observed that the greatest desolation is found on the south side of the city, as though the last assault had taken place on that side. Nehemiah surveys the southern walls and gates first—surveys them leisurely—mentions one spot after another, and the impossibility of getting along; and then hurries over his journey by the brook and round the north of the city homeward. The impression we thus get of greater destruction on the southern side is confirmed by the description of the work of restoration in chapter iii, where it would appear that a larger number of independent workers find occupation on the southern side than on the northern. It is generally assumed that because the northern part of the city afforded higher ground, from which the assault could be delivered more easily, that, therefore, the city would always be assaulted on that side, and the southern and south-eastern parts would not suffer much. But even supposing this to be so during the actual assault, the conqueror might take all the more delight in demolishing afterwards the walls which had defied him.

GEORGE ST. CLAIR.

SEPULCHRES OF THE KINGS.

WHY should not excavations be made at Jerusalem with the direct object of finding the tombs of David, Solomon, and their successors? The area of search would be limited, for most of the kings were laid to rest "in the City of David."

1. We may assume that the tombs would be excavated in the hill-side. In a country so rocky as Palestine, the dead could not be buried in the soil as a general rule, for the soil would be absent and an excavation must be made. Tombs could be excavated in the side of a hill with less labour than from the upper surface, and would be more accessible.

In ancient Egypt tombs were built of brick and stone, or hewn in the rock, according to the position of the necropolis; and whenever the mountains were sufficiently near the latter was preferred (Wilkinson's "Ancient Egyptians," chap. x).

Tombs thus excavated in the hill-side may be seen at Jerusalem, on the eastern side of the valley of Jehoshaphat.

At the so-called Tombs of the Kings, north of the city—the most noticeable sepulchre at Jerusalem, and regarded as the tomb of Helena, Queen of Adiabene—a trench is indeed sunk in the rocky level, and a large court also, open to the sky; but this artificial hollow is made for the

purpose of *obtaining* a hill-side where none existed, and the tombs are then excavated laterally.

The graves in the modern cemeteries at Jerusalem may be dug in the soil, but this exception is not to the point, because the "soil" is artificial *débris*, which has accumulated since the days of the early kings of Judah. Where the Mohammedan cemetery exists, under the east wall of the Haram Area, Sir Charles Warren found loose stone chippings and other rubbish to a depth of 70 or 80 feet; but on various parts of the rocky bottom the remains of stone walls, showing that the rock at one time formed the surface.

The Scripture statement that the kings were buried *in* the City of David is not inconsistent with the idea that the sepulchres were excavated from the outside; for the bodies, though carried out of the city for burial, and deposited in the rocky chamber, might very well be under the city streets, perhaps under the royal palace, and accessible by a shaft from the palace grounds.

2. The valley in which the tombs were cut would be some part of the Tyropœan, so that the area of search need not be very large. Much of the ground, fortunately, is accessible, either lying outside the walls, or covered only by cactus gardens within.

Certainly there is the moot question, on which hill was the City of David? and until this is decided we cannot tell whether we should keep to the eastern or the western side of the valley in our search. The Egyptians preferred western hills for their tombs, because they afforded a face to the east. The necropolis of Thebes was on the western side of the Nile. The temples built in front of a pyramid, for the worship of the king, and the *mastabas* erected above ordinary tombs have their entrance always from the east. We cannot be sure that the Hebrews would follow this example, but their temple on Mount Moriah opened to the east.

In the excavation made by Queen Helena, also, the portico is on the west side, and so, of course, is open to the east. On the other hand, some of the tombs on the eastern side of the Kedron Valley open to the west.

3. It is quite feasible that the tombs and the sarcophagi, perhaps even the bodily remains, should be found. They are not yet 3,000 years old, and we have recovered and identified the mummies of Egyptian monarchs of much older date. Wilkinson reminds us that the custom of embalming bodies was not confined to the Egyptians. "The Jews adopted this process to a certain extent, 'the manner of the Jews' being to bury the body 'wound in linen clothes with spices,' as Lazarus was swathed in bandages." We have no historical account of the sepulchres having been disturbed. While the Kings of Judah were in power the tombs of their ancestors would be safe, and after the accumulation of *débris* in the valley the mouth of the cave or excavation would be covered and hidden. Besides, even when tombs are rifled and bodies stolen, stone coffins remain, and inscriptions abide to tell us of the past—as we see by the sarcophagus of Cheops in the heart of the Great Pyramid. Think of the

intense interest that would attach to the discovery of David's tomb, with an inscription in the oldest form of Hebrew ever found !

4. Might not this question be submitted to a committee of experts who should decide upon the most promising points for probing the ground ?

GEORGE ST. CLAIR.

THE SAMARITANS.

I. *Their Numbers.*—There appears to be some mistake abroad concerning the actual number of the Samaritans, and this, of course, affects the question of the probable survival of this interesting people for a longer or a shorter time. In Dean Stanley's "Lectures on the Jewish Church," Part I, Appendix II, mention is made of "the whole community—amounting, it is said, to 152, from which hardly any variation has taken place within the memory of man." This was during the Prince of Wales' visit to Palestine in 1862, and it does not lead us to expect any early decline. But Captain Conder, in "Tent-work in Palestine," assures us that year by year the Samaritans are dying out. "Clinging to Shechem and the Holy Mountain, they are the last left of the nation which in the fifth and seventh centuries spread far over Palestine and Egypt." "In 1872 the little community numbered 135 souls, of whom no less than 80 were males. The Moslems say that the number is never exceeded, and that one of the 80 dies as soon as a child is born. By the defection of Jacob Shellaby with his family they have been reduced to a total of 130 souls."

A decline of 17 souls in ten years—reducing the numbers from 152 in the year 1862 to 135 in the year 1872—would bring the numbers down to 110 in 1887, if the decline continued, and end in the speedy extinction of the race. On a recent visit to Nablus I made inquiry on this point, and my questions were put to the High Priest himself. His reply was that his people numbered from 96 to 100, but this (he said) was without counting certain women and children, who might bring up the number to 165. If these women and children were included in Dean Stanley's estimate, there would appear now to be some increase in the number of souls; but if they were not taken into account either by Dean Stanley or Captain Conder, it would seem that the decline of the little community is proceeding at an accelerated pace.

II. *The Ancient Copy of the Law.*—Travellers have spoken of the great difficulty they experienced in obtaining a sight of the most ancient Samaritan roll. In 1865 it was considered a great favour, I believe, shown to Sir Charles Wilson, that he should be allowed to photograph it for the Palestine Exploration Fund. Captain Conder describes the difficulties raised, in a later year, when he and Mr. Drake visited the Synagogue. The High-Priest Amram first brought out the latest scroll—written in black ink on parchment, rolled on two rollers, and enclosed in

two cylinders of brass—and affected to be surprised when Mr. Drake asked to see the next. They did see the next, which was of older appearance, also in a brass case, with huge knobs to the rollers. The High Priest and his nephew Jacob now declared that there was no older scroll, but Mr. Drake knew that there was, and eventually they succeeded in seeing it. It is kept in a silver case, and purports to have been written by “Abishuah, son of Phinehas, son of Eleazar, son of Aaron the priest, in the thirteenth year of the possession by the children of Israel of the land of Canaan and all its boundaries.”

Captain Condor found that the priests manifest the greatest reluctance to showing this sacred relic ; it is a Samaritan Fetish, and is only seen by the congregation once a year, when elevated above the priest’s head on the Day of Atonement.

I suppose, therefore, that the priests have adopted a new *ruse* to throw the curious off their guard, and that I and my companions were too credulous on our recent visit. We were shown first a book of the Law in volume form, which was said to be 750 years old. Next, an older looking copy, a *roll*, asserted to be 1,260 years old. Lastly, a roll in a silver case, which we were assured was written by Abishua, the great-grandson of Aaron, 3,472 years ago. I only carried in my mind that the first and second copies usually shown to travellers were comparatively modern, and I must insist on seeing a third ; I did not remember that all three were to be *rolls*. And when the High Priest declared on his word that the third book which I had seen was really the oldest they possess, I thought probably he was to be trusted. I was a little surprised that he should sell me a photograph of himself, holding this roll open ; but I supposed that a good deal of reticence might have disappeared since 1865, and *backsheesh* was year by year proving more potent.

I may mention that the silver case which contained the oldest copy of the Law shown to us was covered with engraved symbols, among which I noticed the cherubim (which appeared to have the head and wings of a bird) ; “Aaron’s rod,” which was quite a tree, and very much like the conventional tree of mythology ; and the “flames from the altar,” which had a conventional form, such as is seen in hieroglyphics. This silver case, we were told, was 300 years old.

GEORGE ST. CLAIR.

THE PALESTINE EXPLORATION FUND

NOTES AND NEWS.

With this number is completed the "Survey of the Jaulân," by Herr Schumacher. The work was originally executed for the German Palestine Exploration Society, and published in their "Zeitschrift." We have been enabled to translate it by the kind permission of the Committee of that Society, and have obtained from Herr Bädcker all the blocks for the illustration of the work.

It has been printed with large margins, so that while it is uniform with the *Quarterly Statement*, and may be bound up with that journal, subscribers may detach it and have it bound in the same form and size, and with a similar cover, as Captain Conder's works.

The Committee will be happy to exchange bound copies for the unbound copies presented with the *Quarterly Statement*, at the price of 1s. 6d. each, to cover binding and postage.

With the July or the October number will be presented Herr Schumacher's Survey of Pella, the city to which the Christians fled on the outbreak of the troubles in Jerusalem. There are many drawings and plans to accompany this memoir.

Herr Schick follows up his paper on the discovery of Constantine's Pavement with Notes which demand careful attention. Sir Charles Wilson has added remarks upon these Notes, which separate theory from fact. It is greatly to be hoped that the Russian Society will carry on this work, which is upon their own ground. The discovery of the two pavements, the supposed ditch of the second wall, the granite columns, open up questions of the highest importance.

The List of Old Testament names and identifications was issued last year. That of New Testament names, which contains the references in Josephus to the New Testament places, is nearly ready. It will be issued before the end of April. Subscribers can have copies of the latter, separate, at 1s., and of the two together, in paper cover, for 3s., and bound for 3s. 6d., by application to the office only. To the general public the price of the book will be 6s. 6d.

Meantime, with the view of clearing off the MSS. which await publication, the Committee have resolved on issuing an edition in form similar to, and uniform with, the "Survey of Western Palestine," of the following works:—

1. Conder's "Survey of Eastern Palestine," so far as completed. The MS. is very voluminous, containing as much as will make a volume equal in size to those of the "Memoirs" in the "Survey of Western Palestine." None of it has been published; the drawings are very numerous, and of the deepest interest to the student of prehistoric monuments, as well as for the illustration of the Bible.

2. The Archæological Mission of M. Clemont-Ganneau, with the drawings of M. Le Comte.

These drawings are many hundreds in number, and executed in the finest style. They figure a vast number of monuments and ruins not in the "Memoirs."

3. The Flora and Fauna of the Wady Arabah, by J. Chichester Hart, Esq., accompanied by many drawings of plants, &c., in the best style.

The editions will be limited to 500. The first 250 subscribers will pay seven guineas for the three volumes; subscribers to the "Survey of Western Palestine" will be privileged to have the volumes for this sum. The price will be raised, after 250 names are received, to twelve guineas. The Committee are pledged never to let any copies be subscribed under the sum of seven guineas. Mr. A. P. Watt, 2, Paternoster Square, is the agent.

The Director of the Palestine Pilgrims' Text Society promises the following works for the year 1888:—

The Pilgrimage of the Abbot Daniel—now ready.

The Norman-French Description of the Holy Land and of Jerusalem—ready in May.

The Travels of Nasir-i-Khosrau, translated by Mr. Guy le Strange—in June. Arelufus de Locis Sanctis, translated by Rev. R. Macpherson—in June.

Two Letters, from Sir Joseph de Lancy, Knight Hospitaller, to King Edward the First, endorsed "News from Syria," and from the King to Sir Joseph.

The Report and Balance-sheet of this Society for the last year are now ready. Readers will note that the library it is forming of pilgrims, geographers, and historians is quite unique, and cannot be procured except by subscribing to the Society.

The friends of the Society are earnestly requested to use the "Memoirs of Twenty-one Years' Work," as a means of showing what the work has been, and what remains to be done.

An announcement was recently made in the papers to the effect that, among the Sidon sarcophagi, was one containing the body of Alexander the Great. So far the news is not confirmed, and there seems every reason to doubt the fact, unless the details given by the historians are all wrong.

Subscribers are very earnestly asked:—(1) To pay their subscriptions early in the year—say in January. (2) To pay them direct to Coutts and Co. by a banker's order. (3) If they would rather choose their own time, to send up their subscriptions without being reminded. The Clerical Staff of the Society is small; it is most desirable not to increase it; and if these simple requests are attended to a great saving of clerical labour, postage, and stationery is effected. For instance, there are, say, 3,000 subscribers. If every one of these waits to be reminded, and has to have a receipt sent to him, the Society has to spend £25 a year in postage, and to write 6,000 letters, merely to ask for and to acknowledge the receipt of the subscriptions.

The following books are now published uniform in size and appearance :— Conder's "Tent Work ;" Conder's "Heth and Moab ;" Schumacher's "Across the Jordan ;" "The Memoirs of Twenty-One Years' Work ;" Conder's "Syrian Stone Lore ;" Conder's "Altaic Inscriptions," and Schumacher's "Jaulan." Subscribers can have the whole set, together with Hull's "Mount Seir," and Names and Places, for 32s., carriage free.

Mr. Armstrong has prepared a list of the photographs belonging to the Society arranged alphabetically according to those Bible names which are illustrated by views. This list is now ready. Those who wish for a copy may send in their names.

The income of the Society, from December 14th, 1887, to March 21st, 1888, inclusive, was—from subscriptions and donations, £492 3s. 3d.; from all sources, £971 12s. 1d. The expenditure during the same period was £864 15s. 5d. On March 23rd the balance in the Banks was £328 6s. 6d.

Subscribers who do not receive the *Quarterly Statement* regularly, are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

The only authorised lecturers for the Society are—

- (1) Mr. George St. Clair, F.G.S., who has lately returned from his Eastern tour, and is giving Lectures for the Society in all parts of Great Britain. His subjects are—

- (1) *The Buried City of Jerusalem*, and General Exploration of the Holy Land. Numerous diagrams.
- (2) *Buried Cities of the East*. Numerous diagrams.
- (3) *Sight-seeing in Palestine*. Lantern views, where local help can be obtained.

Address : G. St. Clair, Bristol Road, Birmingham ; or at the Office of the Fund.

- (2) The Rev. Henry Geary, Vicar of St. Thomas's, Portman Square. His lectures are on the following subjects :—

The Survey of Western Palestine, as illustrating Bible History.
Palestine East of the Jordan.
The Jerusalem Excavations.

A Restoration of Ancient Jerusalem. Illustrated by original photographs shown as "dissolving views."

- (3) The Rev. James King, Vicar of St. Mary's, Berwick. His subjects are as follows :—

The Survey of Western Palestine.
Jerusalem.
The Hittites.

The Moabite Stone and other monuments.

- (4) The Rev. James Neil, formerly Incumbent of Christ Church, Jerusalem,

TREASURER'S STATEMENT.

Subjoined is the Balance Sheet for the year 1887. It will be observed that under the head of Management only £407 5s. 7d. has been expended; this is much less than heretofore in consequence of the Secretary having drawn no salary. Under the new arrangement Mr. Armstrong becomes Assistant Secretary. The management expenses will amount to about £500.

The amount spent on Exploration shows that the work of the Committee is still actively carried on.

The Society has agents in the country who neglect no opportunity in pursuing those investigations, the results of which are given to subscribers in the *Quarterly Statement*.

The income of the Fund from the sale of their books now amounts to a considerable sum. The great excess of expenditure over receipts under the head of "Printers, &c.," is due to the cost of the *Quarterly Statement*, the publication of which is necessary for the very existence of the Society. It also includes the postage of the *Statement* for the year.

BALANCE SHEET FOR YEAR ENDING 31ST DECEMBER, 1887.

RECEIPTS.				EXPENDITURE.			
	£	s.	d.		£	s.	d.
Balance, 31st Decem- ber, 1886	322	11	0	Management	407	5	7
Donations, Subscrip- tions and Lectures..	1,572	9	11	Exploration	647	14	0
Maps and Memoirs ..	280	10	4	Printers and Binders ..	942	4	0
Books	369	10	3	Maps and Memoirs ..	337	3	7
Photographs	5	1	5	Balance, December 31st, 1887	215	15	9
	<u>£2,550</u>	<u>2</u>	<u>11</u>		<u>£2,550</u>	<u>2</u>	<u>11</u>

In other words, the total expenditure was £2,334 7s. 2d., of which exploration took 27·7 per cent.: publication, 54·8 per cent.: and management 17·5 per cent.

As regards the present financial position of the Fund, we have already this year lowered the liabilities in the account of printers, binders, and lithographers by nearly £500—under this head we have a debt which is always being diminished and always increasing.

The debt of £850 has been reduced by £150.

The accumulated mass of memoirs which has been so long waiting for publication will, it is hoped, be all issued before the end of the year in an edition limited to 500 copies, uniform with the *Survey of Western Palestine*.

But new materials are always coming in, and subscribers who ask what the Society is now doing are reminded that it is not the accumulation of facts alone that is wanted but their publication.

WALTER MORRISON,
Hon. Treasurer.

NEW EXCAVATIONS IN JERUSALEM.

I.

Jerusalem, February, 1888.

IN October, last year, I sent the Palestine Exploration Fund some drawings, with notes, of the old "Market"¹ to the south-east of the Church of the Holy Sepulchre. They were published in the *Quarterly Statement* for January, 1888, page 17, and I now send plans and sections of what was found to the north of the old "Market."

Plan No. 1.—At the bottom, on the left side, is part of the present *Sâk*, or Market. North of it is the street, *Khan ez-Zeit*, running to the Damascus Gate, or *Bâb el-Amûd*. Along this street there are shops; and at the north end of the plan are steps, and a raised road, passing over arches westwards to the Coptic and Abyssinian Convents. Near these steps are three granite columns, broken, but still *in situ*; a fourth was removed about twenty years ago, when a door was broken through the wall to make a wood-store. There are also some remains of a pier or stone jamb; and this, with the columns, formed in the Byzantine period the "Propylæum" of Constantine's Church; the columns probably extended farther north, but this cannot be ascertained on account of the buildings.

The wall which now closes the space between the columns was apparently built by the Crusaders. The open area between the columns and the east wall of Constantine's Church was vaulted as it is now. At the south end of the vault, which shows traces of restoration, there is an old wall, partly Jewish, but principally Byzantine.

At the bottom of this wall there is the ancient "threshold" (*see* Sect. 2); it is one stone, with a tread little more than one inch high, for the folding doors to shut against. The "threshold" of an ancient door is certainly Jewish, and in the Byzantine time it was used again as a door; but it opened (unexpectedly) outwards, proving that the open Propylæum could be shut up against the court of the Church. The lower part of the western wall of the Propylæum is of Jewish masonry, with drafted stones; higher up it is of Byzantine masonry, which can be well seen in the houses to the north; it formed the east wall of Constantine's Basilica. The southern wall of the Basilica was also built on old Jewish masonry, which forms a slightly obtuse angle with the east wall. This angle and the lowest course of stones in the wall are Jewish; the stones of the upper courses are smooth, smaller, and Byzantine. On the north side of this wall stone corbels were inserted at a later time (perhaps by the Crusaders), in order to vault the space. In the parallel wall to the north there are similar corbels. The Byzantine building, according to Eusebius, had no vaults or arches, but was roofed with timber, &c. South of the southern wall of the Basilica is a fine platform,² paved with very large

¹ The old market has been pulled down and no trace of it can now be seen.

² About seven feet above the surface of the street *Khân ez-Zeit* to the east. The rock is very near the surface of this upper platform.

flat smooth stones. On the north part was an open passage beside the Church ; on the southern part a cloister or covered passage. From this raised platform, broad steps lead down to a similarly paved platform, nine feet below, and to the old gate. (*See* No. 3.)

Some traces of rock-hewn steps can still be seen. In the Russian part of the vault, on the site of the Propylæum, a pavement was found, formed of large stones, from 1 foot to $1\frac{1}{2}$ thick, more than 3 feet long, and 2 feet 6 inches to 2 feet 8 inches wide, nicely and exactly laid, with good joints ; the upper surfaces are very smooth, as if originally polished. This pavement extends southwards to the street *Ed-Dabbaghin*, or as far as the place was cleared of ruins, stones, and earth ; it probably extends further south, and perhaps also to the east. It has a fall towards the south, so that the water could run into the rock-hewn sewer, or, further south, to the masonry sewer. (*See* Nos. 1 and 2.) About the middle of the pavement is the so-called "Greek Arch," known for many years and figured in books about Jerusalem.¹ The north pier is apparently Byzantine, built of smooth and well-cut stones, which are much damaged by age. The south side is formed by a column with a block capital, unlike the one on the pier. This has puzzled everyone, and given the impression that it is a reconstruction and not the original arch ! Yet the column may be genuine with a wrong capital upon it. In this case the column must have stood in the centre, and the whole have formed a double arch. So the Russian Archimandrite understood it, and he intended restoring the arch according to his view. He built a new pier to the south, prepared a Corinthian capital, &c. ; but, on closer examination, I found there had been only one arch, and no column. It is quite clear that the northern pier was once broader (as shown in Nos. 1 and 2). No 2 gives, in elevation, the number and size of the stones where the joints do not run through.

I have shaded the older or Byzantine portion, and am convinced that the southern pier originally had the same form and size, and that the Corinthian capital, which carries one side of the arch, stood on the southern pier, like the one on the top of the northern pier. In the Byzantine portion there are five courses of stones from the pavement to the spring of the arch ; I cannot tell the thickness of the missing abacus, but the curve of the arch can still be seen (in No. 2). In place of the abacus there is now a stone, with mouldings on its face, which I think must have been the key-stone. The key-stone certainly had some ornament ; it was probably broken by the falling of the arch, and then chiselled to fit its present place. In accordance with these indications, I have restored the arch in No. 3. The arch probably had an attic, which I have not attempted to restore. The entrance to the passage is 12 feet 8 inches wide, at the centre it is 14 feet wide, and it is 13 feet deep. It was once arched over, and I think it was a monument of some event ; very likely

¹ *See* Sepp, "Jerusalem and the Holy Land," i, 226, where it is called an ancient town gate.

of the passing of our Lord to Calvary. It formed at the same time an entrance to Constantine's Church, for a road ran westwards from it, along the side of the southern cloisters of Constantine's Church, which stood at a higher level, to the present south court of the Church of the Holy Sepulchre. It might thus be considered part of the Propyleum mentioned by Eusebius. The column is of reddish limestone, and so is the cracked unfinished capital ; but the basement is of white marble, which has apparently been used a second time. Another similar basement was found in the rubbish near the side of the column.

As the Russians found no cistern on their property, and water was required for any building erected upon it, they resolved to make a new cistern. North of the "Greek Arch" the rock was known to be everywhere near the surface, and as it would have been difficult to dig a cistern there, they determined to try the ground to the south. They removed the Byzantine pavement, and finding at first earth and stones, they were able to dig down 5 or 6 feet, they then came to hewn stones, lying in disorder as if they had fallen down on the destruction of a wall or building. They removed the stones until they had made a pit more than 20 feet deep, about 45 feet long, and 28 feet wide. As they had then obtained the requisite size for the cistern, and further excavation would have been dangerous on account of the loose stones on the three sides, and the proximity of the new Greek building, they did not dig deeper. They built the walls of the new cistern, and at the bottom ran in dissolved lime until all the empty spaces between the stones were filled up.

On the east side they found an ancient wall, running north and south, nearly under the present boundary wall of their property. Under the pavement the wall consisted of two courses of large smooth Byzantine stones resting on five courses of rather smaller stones, with dressed joints and rough faces. Each course is set back a few inches, as shown in Section 2A. This wall of seven courses stands on bad rubble masonry, built with small stones of all sizes and forms ; what is lower down I do not know. When this wall was discovered it was rumoured that the ancient town wall had been found ; this is only to a certain degree correct. It is now quite clear : first, that there was a trench here, and if this were the ditch of the town wall, the latter must have stood on rock, or above a rock-scarp, and not on rubble ; secondly, the wall is not Jewish but Byzantine, with some Jewish stones built into it. Towards the south the stones are much smaller, and it seemed as if there had been a reconstruction. I cannot tell what will be found farther south, nor the real lie of the rock at the bottom of the trench, but I have embodied my views in the sections. Some of the over-turned stones in the ditch are really Jewish, with the draft on their faces, and these are the largest ; the others are of different size, but all smaller and with smooth faces, I therefore call them Byzantine.

In the wall there was a door-like opening—the outlet of the sewer from the old market ; I tried to clear it out, but after 5 or 6 feet found it walled up. Perhaps when the new pavement of the street is made by

the Municipality it will be opened. I think, farther east, it is rock-hewn, as a little east of this wall the rock rises above the ground. As the rock is near the surface beneath the "Greek Arch," and no rock was found 12 or 15 feet from it at a depth of 22 feet beneath the pavement, there must be a rock-scarp in the interval such as I have shown in Nos. 2 and 3. I asked the Russian Archimandrite to order the foreman of the workmen to clear away the stones for about 10 feet more towards the north, and told him he would certainly find a rock-scarp, and so have no need to build a wall there for the new cistern, whilst the cistern itself would be so much the larger. I also told him I was convinced he would find rock-cut tombs or other caves in the rock-scarp. I asked him, when the walls of the new cistern had reached a height at which there was no longer any danger, to sink a shaft in the centre of the cistern, so as to ascertain the real lie of the rock, and I offered to pay the expenses myself. The answer was that they could not do anything without an order from St. Petersburg.

The Archimandrite considers this proposed excavation interesting, and thinks my suggestions are right, but he has first to report upon it to St. Petersburg; the excavation may therefore still be made. The caves in Nos. 2 and 3 are shown as I think they will be found.

The internal measurement of the new cistern is about 40 feet by 13 feet; it is not arched but covered with iron rafters, as shown in No. 3.

The southern boundary wall of the Russian property proved to be made up of three walls; in the centre there is a thin Byzantine wall of finely hewn stones, probably standing on the pavement; this is strengthened on the inside by a Crusading wall, which stands on earth and goes down but a few feet beneath the surface. On the outside it is supported by a Moslem wall, standing on the surface of the street, which was built when the wall was beginning to give way under the pressure of the vaults with their heavy load of earth. In the Muristan, 120 feet south of the Russian property, the level of the rock is known, and if this be connected with the rock level under the "Greek Arch," it will give the original slope of the hill as shown in No. 2. The new southern boundary wall will be in a straight line with the new Greek building, as shown in No. 1. As a corner of the old building projected into the street it had to be removed, and this has partly been done. They first tried to make the new cistern there, but came upon an ancient massive wall, which, I think, is the old or Jewish wall, probably standing on a rock-scarp, as not far east of it the rock rises above the ground.¹

CONRAD SCHICK.

¹ The rock level here was originally 2,470 feet, but it has recently been lowered to 2,468 feet above the sea.

II.

MR. SCHICK'S paper completes his description of the very interesting discoveries made in the Russian property to the east of the Church of the Holy Sepulchre. It is greatly to be regretted that such a favourable opportunity for thoroughly examining and clearing this most important locality should have been lost. The questions which Mr. Schick raises with regard to the existence of a rock-hewn ditch, the course of the second wall, and the exact position of Constantine's Basilica, are of the greatest interest to every student of Jerusalem topography; and it is to be hoped that the Russian Palestine Society may be induced to resume the abandoned excavations and clear the entire area. It is only by taking advantage of opportunities of this nature that we can ever hope to re-construct ancient Jerusalem.

Though the discoveries that have been made are of high interest, I am not able to agree with the deductions that Mr. Schick has drawn from them, and it may be as well to state some of the objections that occur to me. (1) Mr. Schick believes that the granite columns in the street *Khan ez-Zeit* formed part of the Propylæum of Constantine's Basilica. In 1865 ("Notes to the O.S. of Jerusalem," 53, 54) I drew attention to the fact that "these remains, some of similar character in the ground formerly belonging to the Knights of St. John, and the so-called 'Gate of Gennath,' are nearly in the same straight line." A glance at the plan of Jerusalem will show that from the Damascus Gate a street runs southward to a point in the city wall where the Sion Gate stood before the walls were rebuilt in the sixteenth century. This street, I believe, follows the line of the main street of *Ælia*, which, in all probability, was adorned with columns as in the similar cases of Samaria, Scythopolis, Damascus, Gadara, Gerasa, &c. If this supposition be correct, the columns belong to the street; and the "Greek Arch" and "Gate of Gennath" are the remains of ornamental portals leading to side streets. The columns are certainly not such as we should expect in the Propylæum. Whether the Damascus Gate received its name of *Bâb el-Amûd* from these columns or from the great column which, when the Moslems first took the city, marked the centre of the world, is uncertain.

(2) That the ancient masonry uncovered is Jewish. In 1865 I made some tentative excavations, and came to the conclusion that, though old material had been freely used, none of the existing remains bore the character of mural masonry. The remains seemed to me to belong to an old church, and this view was partially confirmed by the discovery of a very fine font or basin of white marble. ("O.S. Notes," 53, 74.) The character of the masonry, however, led me to believe that the church was a re-construction after Constantine's churches had been destroyed, and that it might even be as late as the period of the Crusades. The position is not that in which we should expect to find Constantine's Basilica.

(3) That the "threshold" is Jewish. Without personal examination

I should be sorry to pass a decided opinion ; but this stone appears to me to be an old lintel used during a period of re-construction, and not to be *in situ*, as Mr. Schick supposes. There seems no valid reason for believing it to be Jewish.

(4) That the new cistern made by the Russians is in the ditch of the second wall. The truth of this speculation can only be proved by excavation ; it is not impossible, but the space cleared is so small that it is rash to base any theory upon it, and there may have been an old cistern on the spot. Mr. Schick's view of the further course of the ditch is open to greater objection. He places the chapel and cistern of Helena in the excavation. It is true that no rock can be seen in the chapel, on account of the plaster, but what we know of the lie of the rock near it would lead us to believe that a portion of the walls are of rock. As regards the cistern, I find in the "O.S. Notes" (p. 54), that is described as being "of irregular shape, hewn out of the *Malaki* bed, with the overlying bed of *Missae* left as a roof, one of the most ancient types of cisterns, and similar to those in front of the *Masjed al-Aksa*." If this description be correct, and I have no reason at present to doubt it, the ditch could not have run in that direction. There are other objections to Mr. Schick's theory, the discussion of which would occupy too much space.

(5) The pavements are not the least interesting of the discoveries. The lower pavement is on the same level as the floor of the Rotunda in the Church of the Holy Sepulchre ; the upper one at a slightly lower level than the floor of the Chapel of the Exaltation of the Cross, which is almost due west of it. How far either or both are the work of Constantine is a question ; the lower one may in part be the street pavement of the city of *Ælia* ; the upper possibly connected with the platform of the Temple that preceded the Church of Constantine.

It is so important that researches should be carried on at this spot, that the Committee have taken steps which they hope will be successful to work in co-operation with the Russian Society.

C. W. W.

LINE OF SECOND WALL.

Jerusalem, February 14th, 1888.

I.

In the *Quarterly Statement*, 1888, page 16, Dr. Merrill pointed out that my Statements and Plan in *Quarterly Statement*, 1887, page 217, were wrong in two important points.

First, that the ancient remains of the so-called "second wall" are not in its right position and direction; and secondly, that I have not given it in full length !

To this I have only to say :—It is not my custom to go into any controversy at length, but only stating facts for my defence. In respect of

the second point I wish to say that the gentleman he calls the "Engineer" showed me the exact spot of the ancient stones towards north, at a point a little south, opposite of the corner of the street going eastwards (or the home of the Sisters of Zion), and that in the *Quarterly Statement*, 1886, page 23, Dr. Merrill himself gives its length to about 30 yards, that is 90 feet, and my drawing in *Quarterly Statement*, 1887, page 217, shows 108 feet; and in respect of its "prolongation towards north-west," the "Engineer," the mason, and other people who had seen it, told me that it was a wall of quite another description, and not grounded on the rock but standing on earth; further, in that region all foundations for the new building were made new—as I myself have repeatedly observed, and the "Engineer" told me.

In regard to the first point, the old wall shown in my plan as not giving its right position or direction I have to say: that the street had formerly been at an average of 10 feet wide, but now, after the new building is made, is now on an average of 15 feet wide. When the street was altered, see *Quarterly Statement*, 1886, page 23, for the description in the last 8 lines: "The large displaced stones, represented by the heavy broken line opposite Frutiger's Bank, which were found when grading the street, would be on the line of the old wall beneath them." These stones formed, as it was plainly perceivable, the inside of the ancient wall, and was partly under the narrow (old) street. As the ancient wall was of considerable breadth, its western face certainly fell "inside," i.e., towards west of the old boundary wall of the "open field"—but as the new building was put backwards, and the street made 5 feet wider, it fell nearer the edge of the new wall. The "Engineer," the mason, and others told me plainly, in the south, the *whole new wall stands on the old*, in the middle not fully the half, and in the north *nothing at all*—"not one inch," as the "Engineer" said—and accordingly, as I have seen the remains, consider the plan to be correct.

Finally, when my plan in 1887, page 217, does not agree with the one the "Engineer" had given to Dr. Merrill, this I can believe, and understand that I was not able to get also such a one from him, although it was promised to me repeatedly, but I was obliged to make my own, which every one may compare with its object.

The "cistern" spoken of in *Quarterly Statement*, 1888, page 16, I would not call it a "large one." It ends towards west, in about the middle of the (former) street, not going fully to the boundary wall at that time (i.e., to the ancient wall), and its greater part extends eastwards under the building of the Joseph Sisters.

This I thought to be my duty to explain to the Palestine Exploration Fund.

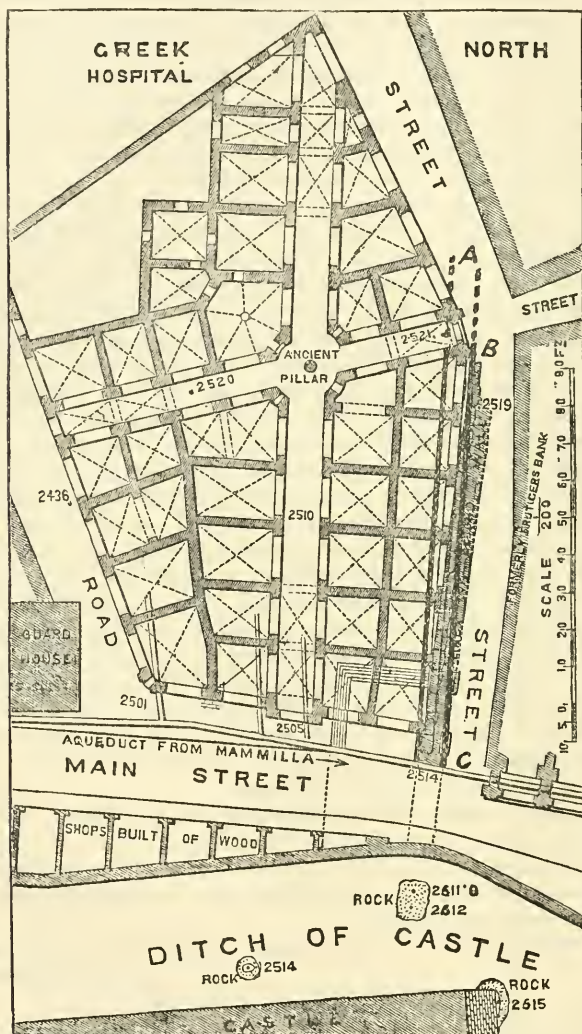
C. SCHICK.

II.

I have indicated on the inclosed plan, which you kindly sent me, the direction of the old wall according to my notes and observations. From C to B the line was nearly complete. From B to A it was broken.

Looking over my notes, and comparing them with the line which the engineer made (indicated in pencil lines on the inclosed plan) of the course

PLAN OF NEW BUILDING NEAR JAFFA GATE, SHOWING LINE OF SECOND WALL.



Thick black lines A, B, C, Dr. MERRILL. Thin lines with shading, HERR SCHICK.

The figures apply to the Rock levels, not the surface of the ground.

of the old wall, I am inclined to think that there may have been a slight angle at or near the point B, the wall beyond B, in the direction of A, turning to the left. If the question lies between Schick, Merrill, and the Engineer, I should say, were I appointed to decide upon it officially, that the Engineer's testimony should have the first consideration.

SELAH MERRILL.

Andover, Mass., U.S.A.

NOTES ON A JOURNEY FROM ISKANDERÛN TO TRIPOLI.

BY GREVILLE J. CHESTER, B.A.

(Member of the Royal Archaeological Institute.)

ON the 20th of November, 1886, I arrived by the Russian steamer at Iskanderûn, which, although an open roadstead, is, from its position, the only tolerably safe anchorage in Northern Syria. The small town of mean dwellings is beautifully situated under the steep but forest-clad range of Mount Amanus, which is an offshoot of the still higher mountains of the Cilician Taurus, whose towering heights are seen in the distance across the gulf. Iskanderûn is malarious and fever-stricken, on account of an undrained and pestilential marsh which festers immediately behind the houses of the town. Drainage would be easy, and would conduce enormously to the welfare of the place, which is almost uninhabitable in summer and early autumn; but the Turks are averse from improvements of any kind, so nothing is done.

In a wonderfully short space of time my excellent servant, Yusuf Basil, of Beirût, had struck a bargain for two horses and a mule for the journey to Tripoli, and by 3 o'clock I was in the saddle. My muleteer, Mohammed, had never before been beyond Antioch.

Crossing the marshy plain, whose stagnant pools abound with fresh-water turtles, and their rushy banks with tree-frogs greener than the reeds to which they cling, I speedily reached the base of the mountain, up which a well-engineered road, constructed by a foreign company, winds on its way to Aleppo, and in three hours reached Beilân, a populous village of Christian Armenians, situated a little below the watershed. I found fair accommodation at a new Khân most picturesquely placed, its stone substructions being thrown across a rocky ravine, and supporting a wooden veranda, out of which the guest-chambers open. The view down the defile, with its precipitous rocky sides, to the tranquil gulf below, with the huge snow-capped mountains of Asia Minor, and in the neighbourhood of Tarsus, is beautiful in the extreme. Below the village the ravine is vocal with falling water, and is full of pomegranates and other fruit trees. The houses of Beilân are flat-roofed, with projecting wooden galleries, and are built in terraces one above the other. The village street

exhibits a condition of cleanliness and prosperity due to the superior civilisation of its Christian inhabitants, and is quite unlike that of a village of Muslim Turks.

Next morning I was off betimes, and in about an hour reached the top of the pass, some 1,600 feet above the sea. In places the road was well-nigh blocked by huge flocks of sheep, which, starting from vast distances inland, and changing conductors two and even three times, are led down to the coast at Iskanderûn for exportation. These animals travel slowly, being often several months upon the road, but they browse in passing where they will, and were all in fine condition. After passing the watershed a splendid view inland bursts on the eye of the Bahr-el-Abyad, the White Sea, or Lake of Antioch, situated in a vast marshy plain, bounded by mountains of fine outline, and studded with lonely Tels, which mark the sites of unknown and long-buried towns. Shortly after passing the summit we left the high road to Halep, and turning to the right, passed across and along numerous wooded ravines which intersect and drain the southern slopes of Amanus. The autumn tints of the deciduous trees on the limestone formation were extremely fine, but the plain below was burnt up to a dusty brown, even to the very edge of the great lake. To the right are seen the imposing ruins of a crusading castle on a precipitous rock overhanging a ravine. This fortress, now called Kulat-el-Bagrâs, is said to be the Mansio Pangrios of the old itineraries, and the Pagræ of Strabo, and was one of the defences of "the Syrian Gates." Descending for about an hour from a point opposite this castle, we reached a small village of miserable huts, named Karamurt, situated on the verge of the plain, close to the ruins of a large and finely-constructed ancient Khân. While resting for a few minutes at a wretched wayside café, a boy brought me a handful of Roman-Colonial and Byzantine coins, but was prevented from selling them by a dirty and ragged Turkish soldier, who was collecting taxes, and probably intended to confiscate them to his own use. The track across the plain from this place sometimes follows the track of the old Roman road, paved portions of which exist in places, and sometimes diverges from it. The soil of the plain is of extraordinary richness, and vast quantities of liquorice spring up spontaneously. It is cultivated in part only by wandering hordes of Turkomâns, Bedoueen, and Kurds, and I passed two or three villages of immigrant Circassians. Asking the character of these people, I received the answer, "*They are very good people in the daytime !*"

On approaching the Orontes, a little above Antioch, whose ancient fortifications had long been in sight, I found it to be an eddying river of a milky-white colour. The stream is impeded by numerous dams and weirs, and huge wooden water-wheels continually turn with a creaking sound like that of a magnified Nubian sakieh, and raise water for the irrigation of the neighbouring orchards and gardens. One of these wheels at Antioch itself is close on a hundred feet in diameter !

The situation of Antâkia or Antioch is worthy of its ancient fame. The modern city occupies but a small corner portion of the ancient site at the

foot and on the lower slopes of Mount Silphius, and extends along the left bank of the Orontes, which is crossed by a single bridge. The ancient city ran high up the slopes of the mountain behind. The existing antiquities are strangely few. Earthquakes, and the still more destructive Turks, have combined to erase the noble features of the ancient capital of Syria, erewhile the second or third city of the Roman Empire. The streets and bazaars are mean and narrow, the centre being occupied by ditches, filled with black mud, dead cats, offal, and every kind of filth, beside which, like swine, the Turkish inhabitants take their pleasure. The bazaars, however, are well supplied with vegetables, and in places venerable plane trees overhang the streets. The lower portion of the city wall, near the river, which in part consists of large drafted stones, and the remains of a tower, seem to be of more ancient structure than the Roman and Byzantine fortifications above, and probably date from Seleucid times. It is harrowing to be obliged to speak of the walls of Antioch, once perhaps the most splendid and picturesque in the world, as monuments of the past. Originally they zigzagged up almost perpendicularly from the Orontes to the very top of Silphius, set thick with noble towers and bastions, some of which were no less than 60 feet in height. On the top the walls leap from rock to rock, crest huge precipices, and in one place stretch across a savage ravine, which they bridge over by means of vast substructions built up from the bottom to a height equal to that of the rest of their circuit. When perfect these walls enclosed a space of seven miles. Now, under Turkish auspices and Turkish rule, the whole of the walls on the slopes or face, as distinguished from the top of Silphius, with their towers and bastions, have altogether disappeared. Multitudes of the finest stones have been transported across the river, and appear as gravestones in the great Turkish cemetery; others have gone to construct a modern barrack. In fact, every one who wants a stone for building or for a memorial of the dead, resorts to the walls, and, without let or hindrance from the authorities, carries off whatever he desires. So the work of destruction begun years ago is still going on, and ere long what might justly have been regarded as one of the wonders of the world will be matter of history only.

It is strange that Antioch is so seldom visited by European travellers, for the scenery is beautiful, and the city has the paramount interest pertaining to it, that it was there that "*the disciples were first called Christians*,"¹ and thence it was that the Apostles SS. Paul and Barnabas started on their first journey to evangelize the Gentiles.² Antioch was likewise the Bishopric held by S. Ignatius, afterwards martyred at Rome in the Colosseum under the Emperor Trajan.

It is very injurious to British interests and to the character of the English as a nation that, in a place like Antioch, the Consular Agency should be confided to a Jew, who is unable to speak a word of any European language.

¹ Acts xi, 26.

² Acts xiii, 1-4.

From Antioch I made a pleasant excursion to Beit-el-Ma, "the House of Water," the Daphne of the ancients. The path led at first along the left bank of the eddying Orontes, and then, turning to the left, I passed along lanes whose high banks of reddish soil, garnished with ferns and trailing creepers, had all the appearance of those of Devonshire. Emerging at length upon an upland plateau, I found the sequestered Beit-el-Ma at the head of a beautiful ravine at the foot of lofty limestone mountains. All remains of the ancient grandeur of Daphne have disappeared; not a vestige of temple or shrine now remains. But the place is one of singular loveliness and seems the very abode of peace. There is "water, water everywhere;" water bursting forth clear as crystal from and out of the rocks above; water racing in little rocky runnels under ancient plane trees and thickets of evergreens; water turning little corn-mills, so ridiculously small that they might seem to be the mills of pigmies; water dashing down in splashing falls, and joining its rills to form a rushing torrent, which foams away half-hidden in bowers of verdure at the bottom of a deep ravine. Around and about the mills I encountered a few Nusaireyeh men and boys in their picturesque garb, and of a personal beauty rarely seen elsewhere. These people do not live at the mills, but at a village about a couple of miles down stream.

The distance from Antâkia to Sueideyeh (Seleucia) can scarcely be more than 16 miles by the direct route—that, doubtless, which was taken by SS. Paul and Barnabas—but the course of the Orontes, which lies to the left of the track, winds to such an extent that its course is more than forty. The road is one of great beauty, passing through wild ravines along the base of the mountain called by the Macedonian Conquerors of the country Pieria, but now Jebel Musa, and crossing streamlets hurrying down to join the swift-rushing Orontes. When the highest point is reached and the corner of the mountain is turned, the sea bursts upon the view, with the mouth of the Orontes and the rich plain of Sueideyeh in the foreground. Off the mouth of the river, as I saw it, lay three large American ships of the United States, waiting for cargoes of liquorice, which is abundant upon this plain also, and which is largely used in the manufacture of tobacco. No town marks the sight of the once magnificent city of Pierian Seleucia, but a few houses and a Turkish custom-house stand a little above the mouth of the river, and the plain of Sueideyeh is dotted with a considerable number of cottages and houses of a better class, mostly embosomed in gardens of pomegranates and other fruit trees. In one of the best of these houses I was hospitably received by a beautiful and gracious lady, the wife of one Simon Panayôt, a Syrian gentleman of the Orthodox Greek Church, who is both a merchant and a cultivator of the soil. My host, who acts informally as agent under the British Flag, was absent on my arrival at the Goletta, but soon came home, and I had the advantage of his company when I rode to visit the remains of the ancient city about 3 miles distant, upon the steep scarp of Mount Pieria, and between it and the sea. These remains, which cover a tract some miles in circuit, are still of considerable

importance, and present a very picturesque appearance, being overhung and often overgrown with gnarled fig and other fruit trees. Overhead are steep and often precipitous rocks, some of which have evidently been artificially scarped. Everywhere they are perforated by innumerable tombs, some of vast size, and in addition to these I noticed many niches intended apparently for *ex votos*.

In some places are perched up huge stone sarcophagi, with wreaths, cupids, and other emblems sculptured upon their outer faces. Most of these have been rifled of their contents, but I saw at least two which are still intact. The remains of two of the city gates, of an amphitheatre, and of large and curious portions of the ancient fortifications can still be seen, and the ruins are everywhere strewn with broken columns, while in one place a headless statue of white marble still stands in its original position. In the low ground in front of the city are massive walls which now inclose a marsh, once the inner harbour of Seleucia. A canal, several hundred yards in length, now choked up, leads from this harbour to the sea ; it was originally protected by bastion towers, of which some vestiges exist. The entrance from the inner to the outer harbour is marked by two magnificent piers formed of vast stones clamped together with iron, of which the southernmost, 120 yards in length, is still in admirable preservation, and vies with any existing work of the kind. It was probably from one of these moles that the Apostle Paul stepped on board the galley which was to convey him across to Cyprus.¹ The view from this spot is of extreme beauty and interest : the mountainous coast to the north, the sweep of mountains to the east and across the mouth of the Orontes, the stupendous limestone cone of Jebel Okra (Mount Casius), rising some 5,800 feet out of the blue waves of the Mediterranean—all these combine to form a picture never to be forgotten. Inland, to the north of the ancient harbour, is a wonderful series of galleries and tunnels cut in the solid limestone rock, and said to be 1,200 yards in length. They served the double purpose of supplying the city with water, and of carrying off the surplus water which accumulated at times in a rocky ravine, to the sea. The depth of these galleries reaches in places to 120 feet. This immense work would answer its purpose to the present day had not the Turks in sheer wantonness blown up the lower part of the excavation, and made a breach through which the water escapes and forms an unwholesome and malarious morass. Judicious digging on the site of Seleucia could not fail to be attended with the discovery of most interesting antiquities.

I rode back to Sueideyeh along the sandy beach which extends from the mouth of the harbour of Seleucia to the mouth of the Orontes, to a spit of sand, on which stands the chapel or wely of Mar Girgis, St. George. This small, whitewashed, domical building, although of Christian foundation, is much frequented by Nusaireyehs, who come from considerable distances inland to make their orisons, with a view to obtaining relief from various diseases. In like manner the Muslim

¹ Acts xiii, 4.

fellahs of Central Egypt frequent the shrine of St. George, at Bibbeh, on the Nile.

I left Sueideyeh betimes in the morning, and was ferried across the Orontes near the Goletta, a little above its mouth, having engaged a young man to act as guide as far as Kesâb, on the further side of Jebel Okra. The path, if such it could be called, for it was often imperceptible led across a marsh at a little distance from the sea, near the supposed site of the ancient Nymphæum, and then under lofty and precipitous rocks of grey limestone, much perforated by caves, in one of which I was glad to take refuge with my little cavalcade during a tremendous shower of hail. From this point I gained the sea beach at an angle of the coast formed by the jutting forth of the immense mass of Jebel Okra, "the Naked Mountain," so called from the bareness of its towering cone. The maps of the Syria coast are most deceiving at this point, as they all of them give the impression that there is a tract between the mountain and the Mediterranean, whereas the very contrary of this is the fact.

Jebel Okra springs up out of the sea, and its steepness is so great that there is no track possible on that side, all passengers being compelled to make a long detour inland. The cone of this great mountain is to Northern Syria much what the cone of Hermon is to Southern Palestine, and from its more isolated position it is even more of a landmark than its more majestic rival. A path used by charcoal burners to convey their wares down to the sea side, leads up the side of the mountain at a point where, albeit it is covered with scrub, it looks from below all but perpendicular. It proved, moreover, so narrow, that my baggage was three times swept off the back of my sumpter-mule by rocks and stubby shrubs which impinged upon the track. This caused so much grumbling on the part of my surly muleteer, Mohammed, that I feared he would strike work altogether, and I thought it best to go on alone and leave him with my servant and guide to settle matters as best they might. I accordingly continued the ascent, holding on by my horse's mane as he clambered up the steep ascent like a cat. On gaining a level space some 1,500 feet above the sea, I waited for near an hour, enjoying the superb view until I was rejoined by my companions, whose voices I had long heard far beneath me. Below lay the pellucid blue sea, the mouth of the Orontes, the chapel of St. George on its spit of sand, the ruins of Seleucia, with Mount Pieria behind it, and beyond again the forest-clad mountains which line the coast towards Iskanderûm, the chain of Amanus closing the prospect. Truly a glorious view of a goodly land—a land which but for Turkish tyranny and misrule might be a very "garden of the Lord." I now made the discovery that my picturesque guide, who was armed with a rusty gun and a portentously long knife, knew absolutely nothing of the way, never having traversed it before. We accordingly strayed from the track until we reached an upland village of the Nusaireyeh, which, from the number of hewn stones and scarped rocks, I judged to be an ancient site. On regaining the path and passing the watershed of the shoulder of Jebel Okra, a

magnificent view presented itself, chiefly of forest-clad mountains, extending range behind range far as the eye could reach. Afar off, in a deep valley, could be descried the village of Urdeh, chiefly inhabited by Mohammedans. After resting an hour for lunch under a gnarled carob tree of great age and size, I commenced the descent on the Eastern slope of the mountain, and having passed a village on the left of the path exclusively tenanted by Muslims, I reached Kesâb an hour before sunset. Though I made several inquiries I failed to learn the site of the Temple of *Ζεύς Κασιος*, where Julian the Apostate went from Antioch to offer sacrifice, but it seems unlikely that its remains have entirely disappeared.

The Christain Armenian village of Kesâb, which is also the name of a considerable surrounding district, is built amphitheatrically on the side of the Jebel facing inland; the flat-roofed dwellings with projecting galleries of wood rising one above another like those of Beilân, and commanding an exquisite view of mountains and of valleys winding amongst them. I found the place in some confusion, for the Turkish tax-gatherers had been all day in the village, and the irregular soldiers—hang-dog-looking ruffians enough—were making their accustomed extra requisitions of bread, fowls, and other provisions. The Armenian community of Kesâb has been settled there for about 300 years, and up to a few years ago had stuck to their ancient faith, and there was one flock under one shepherd, the whole brotherhood dwelling together in unity. This steadfastness, however, proved too much for the equanimity of the Romish and protestant missionaries, who are for ever seeking proselytes from those who hold more ancient forms of Christian belief, and thereby add another element of disunion to poor distracted Syria. Accordingly a “mission” of the so-called “Reformed Armenians,” who acknowledge the supremacy of the Pope of Rome, was despatched to Kesâb, made converts and erected an opposition Church to the old one. Next the United States’ protestant missionaries of Beirût appeared on the scene, preached the New England gospel, made more converts, and built a conventicle at the other end of the village. In addition to these, an Irish presbyterian missionary makes his *villegiatura* with his wife in this healthy village in the summer months, but I did not hear that he had succeeded in establishing a fresh sect of his own. The inhabitants of Kesâb are now torn up by the dissensions of rival religionists.

I started before sunrise next morning with an excellent Armenian, named Cippa, as my guide and guard, passing through very beautiful wooded scenery. The country hereabout on the borderland of two pashaliks is unsafe and has a bad name, and I was assured that the natives who have occasion to go from place to place seldom venture to travel alone. About two hours from Kesâb the geological formation changes from the mountain limestone to volcanic rocks, which often come to the surface in the shape of broken masses of weathered basalt resembling lava. The vegetation changes as if by magic. The deciduous trees of the limestone in their gorgeous autumnal livery of scarlet, flame, and canary colour, which never elsewhere had I seen equalled or even approached in

splendour, suddenly give place to the beautiful, but somewhat monotonous, Aleppo pines. After winding through several rocky and wooded defiles, and crossing several "hills of prey," the path ascends to the summit of a forest-clad mountain, from which a superb view is obtained, and which trends down and ends at the promontory of Ras Buseit, near the ancient Poseidion,¹ whose site is seen on the coast far below. Looking southwards from the summit of the pass, the giant form of Lebanon is visible towering up in the extreme distance ; while in the other direction the far-off mountains of Asia Minor can still be descried across the sea. A tolerably steep descent leads down into the Wady Kandeel, which I followed for many miles. This valley is cultivated by the inhabitants of several Nusaireyeh and Turkish villages, which appear perched up on the top of the whitish clay hills which bound it. The scenery hereabouts is comparatively tame and uninteresting, and seems especially so after the extreme beauty of Casius and its offshoots.

Rain was threatening, night falling, and my horses were knocked up when I was still far from Latikeyeh, my destination for the night, so I was obliged to ask shelter in the cottage of one of the Nusaireyeh in a tiny hamlet at a place to the left of the road, named Hirbeh. These strange people, as is well known, have an equal prejudice against Christians and Mohammedans, and I found Mohammed, my muleteer, who arrived first at the cottage while I was watering my horse at a spring, was already in the midst of a quarrel with the good man of the house ; who, on my coming up, peremptorily refused me hospitality. An old woman, however, came out and spoke up for me, and permission was at last given me to enter. From that moment nothing could exceed the kindness and courtesy of Ibrahim, my host, but it was touching to observe his astonishment when I paid for what milk, and fowls, and fodder I required. After my dinner I brewed a quantity of tea, which I dispensed in three tin mugs to five women seated on a kind of clay dais on my left, and to twenty-four men and boys who sat in a triple semicircle in front of me on the mud floor. The same extraordinary personal beauty which I had observed at Beit-el-Ma, was characteristic also of the community of Hirbeh. They complained bitterly of the tyranny of their Turkish masters, of the exorbitant and illegal taxes they were called upon to pay, and of the requisitions of cattle, sheep, and other produce made by the officials. What weighed upon them most, however, was the ruthless conscription from which, until lately, in consideration of the unorthodoxy of their religious tenets, they had, on payment of a tax, been exempt, under which boys and men from 15 or 16 to 50 were carried off and doomed to serve in the army of the sultan. The harmony of the evening was only once disturbed, and that was when it chanced to be mentioned that a small kitten had recently been brought from Latikeyeh ; whereupon my muleteer exclaimed, "Ah ! it was born a good Muslim kitten, and now it will be brought up a bad Nusaireyeh !" It needed a lavish distribution of loaf sugar to quell the hubbub which ensued.

¹ Herod. iii, 91.

It was with some difficulty that, being dead-tired, I succeeded in getting the single room of the cottage partially cleared, and was able to prepare to go to bed. I slept that night in the single room of the house in company with five men, one woman, one vocal infant of uncertain sex, twenty-six sheep, fifteen goats, cocks and hens galore, a donkey, and the afore-mentioned kitten, which slept peaceably enough at my feet. In addition to these a strange cat came in in the night and consumed the greater part of a chicken destined for my next morning's breakfast. There were no insects!

The road from Hirbeh to Latikeyeh lies along a plain, sometimes cultivated and sometimes overgrown with thickets of lentisk, and a white and purple-berried myrtle, at no great distance from the sea. A flat track near the sea, where the grey rock crops out on the surface, is perforated by numerous tombs.

Latikeyeh, originally a Phœnician town, but restored by Seleucus Nicator, and named after his mother Laodice, was within a few years a tolerably flourishing city. Now its trade has been almost stamped out by the exactions and tyranny of the Government, and it is rapidly falling into decay. I was the witness of a highly characteristic incident. Going into the bazaars I found almost every shop closed, and scarcely a human being could be seen in the streets. I knew it was not the Sunday of the Christians, nor the Saturday of the Jews, nor the Friday of the Mohammedans. At length I found an old crippled jeweller squatting in his stall, and learned the reason of the depopulation of the city. A road (which no one expected would ever be finished) had been projected to go from Latikeyeh to Hamath, and the Turkish Governor had ordered the entire male population, irrespective of age, health, strength, or capacity to work, to turn out upon it. Even those who offered to provide four able-bodied men to labour in their stead were not exempted. Of course, no one was paid for his services, with the natural result that next to nothing was done.

The ancient monuments of Latikeyeh consist only of a few columns of a temple, and of a curious arch of late Roman date, which exhibits some unusual sculptures of shields and arms. Bits of old masonry of huge stones are seen on the edge of the now deserted harbour, and near it are some fine stone warehouses, apparently belonging to the epoch of the Crusades. The venerable Priest of one of the Greek Churches brought for my inspection a superb MS. copy of the New Testament in Greek, for which a very high antiquity was claimed. There is no doubt that the Emperor of Russia offered for it the sum of 2,000*l.*, but the Greek community unanimously refused to part with the precious volume. I do not profess to be a judge, but it did not seem to me that the book was of earlier date than the tenth century.¹

¹ It is possible that this splendid MS. is of the Gospels only, but I unfortunately lost the book containing the whole of the memoranda taken during my entire journey. I must plead this excuse for the baldness and poverty of the present paper.

Leaving Latikeyeh, whose name is probably most familiar to those who know what is *good* tobacco, I forded one of the numerous Nahr-el-Kebîrs, and several other streams, and in five hours reached Jebeleh, the Gabala of the ancients, which gives its name to another splendid variety of the so-called "fragrant weed." This small town, or rather village, which with one single exception is entirely inhabited by Mohammedans, abounds in the remains of past ages, but is itself but a dirty and sorry place. At the northern entrance, near the fine old mosk of Sultan Ibrahim, who is buried within, and the crowded burying-ground, stand the grand ruins of a Roman theatre, whose vaulted passages must have rivalled those of the amphitheatre of Verona. Some of the huge stones of the old harbour may date even from Phœnician times, and the rock tombs are of very high antiquity. Broken columns and hewn stones lie about in every direction. Issuing forth from the walls of Jebeleh I saw the grand phenomenon of two perfect waterspouts, and several other imperfect ones hanging over the stormy sea. In about an hour I arrived at a small bay, near which, on its northern promontory, are the remains of ancient buildings with hewn stones lying about in great numbers. This place is called Tel Sukat. After fording several more streams, I came to another and much larger group of ruins, amongst which burrowed a few fever-stricken Christian inhabitants. It is called Baldeh, the Paltos of Strabo, and is situated on the top of low cliffs close to the sea, into which, hard by, flows a beautifully clear and rapid river named the Nahr-es-Sin, which is crossed by an ancient Arab bridge. At its mouth are the remains of an ancient harbour. To my surprise, my host at Banias, a Syrian of the Orthodox Church, informed me that this river derived its name from the French Crusaders, who call it the *Seine* in memory of their much-loved river in far-off France. In support of this apparently unlikely derivation, he cited the *fact* of certain villages near Latikeyeh being undoubtedly called after Saints of the Latin Church. On the other hand, the name of this river is supposed by some to be connected with that of the Sinites enumerated along with the Arkites and Arvadites in the Book of Genesis.¹

The path onwards from Baldeh leads along the sea shore, and across the bay is seen towering up above the few buildings of modern Banias the stupendous castle of Markab, El Markab, "the Watch Tower," seated on a crag of basalt rising some twelve hundred feet above the sea.

Banias, the ancient Balanea, although formerly a place of great importance and an episcopal see, has so much dwindled down that within a few years past it was entirely without inhabitants. It now consists of a few houses, which line the beach of a tiny bay, in the midst of which rises the new konak of the Turkish Caimacan of the district, who has removed his seat of government from the inconvenient site of Markab, and the quarters of his irregular soldiers. Behind the town there is a romantic rocky ravine with precipitous sides, through which a stream

¹ Genesis x, 17, 18.

finds its way to the sea. There is also a beautiful spring of fresh water, and the numerous walls, foundations, and rock tombs show the ancient importance of the place. I copied an ancient Greek inscription on a stone lying in front of the konak, but the transcript was lost in my note-book.

Next morning I started to visit Markab, sending my muleteer on with the baggage by the direct route along the coast. The ascent is very steep, and the climb a stiff one for man or horse. On the northern shoulder of the hill is a tolerably populous Turkish village in a beautiful situation. I had hoped and expected to find that the Castle of Markab was built on Phœnician, or, at all events, on Roman or Byzantine, foundations, but careful examination convinced me that the whole building is Gothic, of the period of the Crusades. Apart from its superb situation, the Castle of Markab must be almost without a rival. Carnarvon Castle, perched on the top of Penmaenmawr would scarcely equal it in grandeur. The Castle walls rise up from the black basaltic rocks, which in places are scarped to increase their apparent height. On the land side is a deep dry moat and numerous outworks. Vast subterraneous chambers with vaulted roofs were apparently used as stables. Within the walls is a fine first-pointed Gothic chapel, desecrated indeed and neglected, but still in good preservation, and used as a mosk by the few Mahomedans who continue to infest the ruins. The view from the battlements, of sea, winding shores, and distant mountains, is of indescribable beauty. Descending to the coast, I joined it at the mouth of a pretty ravine, on whose edge, overlooking the waves, stands a grand outlying Burj or tower, evidently, like the Castle above, of the Crusading epoch.

The route northwards from this point lies sometimes on, and at other times close to, the sea coast, which is commonly bordered by low rocks often perforated by tombs. Along the whole of this ancient and lonely coast, which once "echoed with the world's debate," the traveller has constantly to dive down into picturesque wadies and to ford streams half-blocked with oleanders and marged with venerable oriental planes. Scarce one of these valleys fails to show one or more arches of a grand old Roman bridge, and in some instances of one of Arab construction, but nothing appears of more modern times. It is the rôle of the Turk to blast, to destroy, to lay waste, not to originate or to restore. Of course, after rains, these rivers, which have their sources in the neighbouring hills, soon become impassable, and passengers prevented from crossing would be left in a country without means of obtaining either food or shelter.

After a long and tiring day I arrived at Tartûs (Antaradus), which, with Rnad (Arvad, Aradus), I have already described in the *Quarterly Statement*,¹ and after some difficulty managed to hire a small room on the top of a house belonging to a kind and courteous young Christian of the Greek Church.

¹ *Quarterly Statement*, October, 1875, p. 218.

I was at first disposed to think that the ancient cemeteries of Tartûs, the Isle of Ruad, and Umrit (Marathus) lay along the sea coast almost continuously from the southern gate of Tartûs to the southern end of the ruins of Umrit, there being, in addition, numerous chambered tombs cut in the rocks above the last-named place. Since, however, it appears that the Aradians were for long time at variance with their neighbours of Marathus on the main land, it is perhaps more likely that, at all events in later times, they would have been compelled to bury their dead, not immediately opposite their island fastness between Antaradus and Marathus, but at a considerably greater distance towards the north, viz., near their land port, Karne, or Karnos, which lies nearly a mile northwards of Tartûs, and still bears the name of Karnun,¹ and where rock tombs actually exist. Anyhow, the limited size of the Isle of Aradus would have rendered burials impossible within its circumscribed area. Excavations would probably determine this interesting point. It is worthy of note that, so far as I could ascertain, the massive bronze rings, apparently leglets, to some of which, in most inconvenient fashion, a second ring of bronze is attached, come from graves situated immediately opposite the island. These objects seem to belong to a very early period. The wealth of antiquities found in and about this neighbourhood is indeed surprising, and I know of no place in Syria where systematic excavations would be attended with more brilliant results.

Between Tartûs and Tripoli I witnessed a beautiful sight. The autumn rains had fallen, and the sand-hills near the sea, near the Elenthern, or Nahr-el-Kebîr, at the "Entering in of Hamath," were covered with the black tents of the Bedawîn, who had come down from the interior to sow their grain, and who were seen far and near turning up the rich dark soil of the plain with their primitive ploughs, to which sorry little black oxen were attached. The day was sultry and thundery, and I encountered and followed for some distance along the flat ground an immense black snake, which could not have been less than ten feet in length. A little further on I saw a Bedawîn woman and her dusky imps stoning to death a small specimen of the same species. I should not have supposed from its appearance that this kind of serpent was poisonous, but my muleteer declared that it was so, and asserted that in the hot weather of summer it "stood on its tail," and with loud hisses struck at passengers who were unlucky enough to meet it. Near the Nahr-el-Bârid I struck into the new road which has been constructed by a foreign company, and leads from Tripoli to Homs.

From Tripoli I returned to Beirût by sea.

¹ *Cf.* Strabo, 753.

THE HITTITE LANGUAGE.

(1.) *Method of Study.*

SINCE the publication of Altaic Hieroglyphs, I have devoted time to the verification of the sounds proposed for Hittite words, by the aid of living languages, which serve to check the results of cuneiform study respecting the ancient Turanian languages of Western Asia. As the results have formed a lengthy MS., I propose to give an abstract of the more striking confirmations of the original thesis, which was to the effect that the Hittite language must have belonged to the same group to which the Akkadian, Susian, and Medic—the old Turanian tongues of Chaldea and Media—belong.

It appears to be now admitted that the Hittites were a Tartar people, and their language should therefore belong to the Turko-Tartar group. The Medic is pretty generally admitted to have been nearest to this group, but the Akkadian has generally been thought to be nearer to the Finnic languages. Lenormant, however, found that Akkadian grammar (especially that of the verb) was nearest to the Manchu-Tartar, which represents a very archaic condition of speech; and he also considered that the Ugrian languages were nearer than the Finnic to Akkadian. The geographical position of Chaldea would render this natural, and the fact that the Akkadian numerals are nearer to the Turkish and to the Tartar is another important consideration. After having compared nearly 400 Akkadian words with Tartar and Finnic roots, it seems to me clear that the Tartar are usually nearest to the Akkadian. I find also that out of about 220 known Medic words 60 or 70 are radically connected with Akkadian words, so that if Medic be regarded as a Turko-Tartar language, the older Akkadian belonging to a period when the various branches of Turanian speech were perhaps less distinguishable, should also probably be classed as Turko-Tartar. In modern Turkish I find nearly 200 words which may be compared very closely with Akkadian. Some of these are dissyllables like *beuluk* (Akkad. *Bulug*), "division;" or *Aka* and *Agha* (Akkad. *Aga*), "prince." But *Guiauk* (Akkadian *Guk*), "blue;" *Pala* (Akkad. *Pal*), "sword;" *Ak* (Akkadian *Ak*), "white;" and the rest represent the more numerous class of ancient monosyllabic words common to Chinese, Mongol, and Tartar languages.

Taking for comparison the dead languages, Akkadian, Medic, Susian, and the dialect of Malamir, I have only accepted for use as a rule words common to two or more of these dialects. Among living languages I have placed first the Turko-Tartar dialects, second the Ugrian, and third the Finnic. I have also given attention to the Etruscan language, of which about 250 words are known, and which is comparable on the one side with Basque and with Ugro-Finnic speech, and on the other with Akkadian. Mongol and Chinese words are also in some cases valuable for comparison. As regards grammatical construction I have studied

the Akkadian, Medic, Susian, and Etruscan, and among living languages the Turkish, Hungarian, and Basque. It appears to me, therefore, that any objection that might be raised to the exclusive use of Akkadian for purposes of comparison will not apply to the present enquiry.

As regards the sources of information respecting the Hittite language, they consist in (1) the names of 30 Hittite Kings; (2) the names of 200 Hittite towns; (3) the sounds recoverable through the Cypriote and other syllabaries as belonging to symbols on the monuments of Syria and Asia Minor. The fact that the Hittite language is comparable to the dialects of Asia Minor, Cappadocia, and the Vannic region, has long been regarded as probable. In many striking instances the royal names of tribes in these regions are comparable with both Akkadian, Medic, and Turko-Tartar words of suitable meaning, and while I believe that the name Hittite should be confined to one tribe dwelling in Northern Syria, it seems to me clear that the Canaanites (especially in the north) belonged to the same stock with the Medes and Akkadians, and with the Asia Minor tribes who afterwards spread to Greece and to Italy.

(2.) *Royal Names.*

As regards the royal names, there are several words which recur in these names and which are very distinctive of Turko-Tartar speech. Of these the most important, perhaps, is that occurring in the forms Tarka, Tarku, Tarkon, and Tarkhu. Thus we have—

Tarka tasas, King of the Hittites.

Tarka nanas, " "

Tarku timme, " Erme.

Tarkon dimotos, " Cilicia.

Tarkhu lara, " Gamgami.

Tarkhu nazi, " Milid.

This word is known in the Etruscan names Tarkon, Tarchu, Tarchnas, Tarcnal, Tarchi, Tarcna (Dennis, "Etruria," ii, pp. 41, 44, 102), and is familiar to us as Tarquin. It is a regular Tartar word for "chief," as in the Uigur *Tarkhan* and Tschuwash *Targan* or *Torgan* (Vambery, Root 182, p. 170), and is used as *Tarkhan* in Siberian (Taylor, "Etruscan Res.," p. 79). Vambery would render it "chief of the tribe," from *Tar* or *Tur*, "tribe," and *Kha* or *Khan*, "chief."

The word *Tar* or *Tur*, however, itself means chief. It seems to occur in the names—

Tartisebu, King of the Hittites.

Tatar, " " "

Totar " " "

Motur " " "

It is indeed a very widely spread Turanian term, recognisable, according

to Vambéry, in the names Tartar and Turk and the Uigur *Töre*, "prince" (Vambéry, Root 197, p. 184), with the radical meaning of "foremost." In Akkadian *Dur* means "chief," and in Medic it is *Tar*. To the same root the word *Tara* or *Dara*, for "God," is probably to be ascribed, as in the Esthonian *Tara* and the Ostiac and Wogul *torüm*, "heaven." The names of Tar and Tarku, deities of Asia Minor, the Akkadian Istar (Ashtoreth), the name Dara for the God Ea, and Dar for the God Asshur, may be compared with the Finnic *Tara* (see Donner, i, p. 127), for "God," and with the Etruscan Turan for the dawn goddess ("Etr. Res.," p. 134). There was a Hittite goddess called Antarta, or Astarta. In modern Turkish *درا* (*dara*) means "a prince."¹ In Tschuwash *Tora* is "God."

Connected with this word is the word Sar, which occurs in the names—

Sap sar,	King of the Hittites,
Maurasar,	„ „ „
Kauisira,	„ „ „
Khetasar,	„ „ „
Sarduris,	„ „ Van,

and many others. This word, though used in Semitic languages to mean "chief," can hardly be regarded as Semitic in the Hittite names, being affixed and not prefixed. In Egypt the word *Sar*, for chief, is traced back to the times of the ancient empire before the Semitic invasion ("Pierret, Vocab.," p. 515). It is used in Akkadian for "chief," and is represented by the modern title of Tzar or Czar, in Russia. It may be compared with the Samoyedic *Jeru*, "lord" (j and r being interchangeable in these languages), and with the Etruscan *Lar* (l and r being interchangeable). The form *lar* seems to occur in the name of the Gangam chief, Tarkhulara. In Turko-Tartar dialects *Sar* or *Ser* means "strong" (Vambéry, p. 145). In Finnic speech *Ser* and *Sur* mean "high" and "great." Like the preceding words Sar appears, therefore, to be a widely-spread Tartar or Altaic word for a person of dignity and power.

The word *Lel* or *Lul* also seems to be recognisable in the names—

Sap lel,	King of the Hittites.
Sapa lului,	„ „ Patinai.
Lalli,	„ Milid.

This may be compared with the Akkadian *Lul* or *Lil*, "king," *Lala*, "ruler." The Hunns called their chiefs *Luli* ("Etr. Res.," p. 323), and since the word Sap means apparently a soldier (from the Tartar root *Sap*, "to strike" or "cleave"—Vambéry, No. 153, p. 142—also found in Finnic, Donner, ii, p. 100—and in the Akkadian *Zab*, "soldier," *Sapar*,

¹ There is another widely-spread word, *Tur*, for "son," and another *Tur*, for "camp."

"sword," and the Medic *Sabarrak*, "war"), it would appear that *Saplel* means "warrior king."

Another word which seems closely to connect the Hittite and the Akkadian is the name *Ispu* or *Esebu*. It occurs in the cases of—

Tartisebu,	King of the Hittites.
Akitisebu,	„ „ „
Ispuinis,	„ Van.

In Akkadian *Issep* or *Essebu* signifies "prince;" *Sib* also means "king" and "shepherd;" and *Sibir* means "harvest." These words seem to be explained by the Tartar root *Sab*, *Sjib*, *jip*, *jüp* (Vambéry, No. 37, p. 35), meaning "to gather" or "bind," while in Finnic *Sap* means "to squeeze" (Donner, ii, p. 62). Thus the shepherd (*Sib*) is the gatherer, the king is he who gathers people like sheep, the harvest is the gathering of corn.

Other tolerably clear Tartar words recognisable in Hittite royal names are (1) *Aka*, "prince"—Akkadian *Aga*, Turkish *Aka* or *Agha*, Uigur *ige*, Cagataish *ege*, Jakut *ieci*. (2) *Ir*, "man"—Akkadian *Eri*, Manchu *Eri*, Turkish *er*, Tschuwash *ar*. In Magyar *ur* means "lord;" in Medic *Ersa* is "great." (3) *Kal*, "strong," "big"—Akkadian *gal*, Susian *Khal*, Turko-Tartar *Khal*, *Khil*, *Khol* (Vambéry, No. 72, p. 67). (4) *Lab*, "brave"—Akkadian *Lab*, *Lib*, Susian *Libak*, Turko-Tartar *Lap* or *Lab*, "strong" (Vambéry, No. 131, p. 120), Turkish *الب*, *alb*, "brave." (5) *Nazi*, "prince," as in Susian and Akkadian. (6) *Bakh*, "king"—Akkadian *Pakh*, Turko-Tartar *Baj*, *Big*, *Bik*, "prince" (Vambéry, No. 205, p. 194), Turkish *بك*, *bek*, "chief" *پك*, *pek* "strong." (7) *Pas*, "chief"—Turko-Tartar *bas*, *bash*, *pash*, "chief" (Vambéry, p. 195), Turkish *پاشا*, *pasha*. (8) *Sun*, "majestic"—Turkish *صان*, *san*, "dignity," Medic *sanu*, "powerful," *Sunku*, "ruler," Susian *Sunkik*, Malamid *Sunkip*, all from the same root. These, with a few others, enable us to translate nearly all the Hittite royal names in an appropriate manner.

It is to be noticed that these proper names often end in *s*, which was thus probably a personal suffix, as for instance, *Pais*, *Kalbatus*, *Samaritas*, *Kamais*, *Tarkatasas*, *Tarkananas*, *Zuazas*. The Cassite proper names, and a good many Akkadian proper names, have the same ending in *s*, as have many names from Asia Minor. The same termination occurs in Etruscan (e.g., *Truials*, "a Trojan," *Huins*, "a Hunn," &c.). In Akkadian we have the word *Su*, "man," which is perhaps the root whence the third person singular in *s*, common to many Ugric and Turkic languages, is derived. In Hungarian (Singer, "Hung. Lang.," p. 84) *es* is a suffix for the agent. The termination in *s* thus agrees with the fourteen words above mentioned in indicating very clearly the Turanian and Tartar derivation of the Hittite proper names for chiefs.

(3.) *Town Names.*

The geographical lists of the Temple of Karnak furnish a yet larger number of non-Semitic names in the Hittite country for analysis. There are difficulties in treating this list since some of the names are pretty certainly Semitic, while in some cases the transliteration is doubtful and in others the name is defaced. A comparative study, however, enables us to recognise certain Tartar roots in this nomenclature, and it has long been the opinion of competent scholars that the language represented by the town names of Northern Syria was neither Semitic nor Aryan, but presented (as do the personal names) the preposition of the defining word which distinguishes Turanian tongues.

1. Perhaps the best instance occurs in the case of the root *ab* or *eb*, as in the names—

Terab.	Rutub.	Tatup.
Nautab.	Papab.	Letep.
Nirab.	Kharab.	Ganiab.

In these cases the word seems clearly a suffix, or the defined word to which a defining word is prefixed. It may be compared with the Akkadian *ab*, "abode," and *ub*, *ib*, "region;" the Medic *up*, "city" (Lenormant); and the Chinese *ip*, "region." In Turko-Tartar dialects *eb* and *ev* signify "a house," from a root meaning "hollow" (Vambéry, No. 47, p. 43), and this is connected with the Turkish *او*, *ev*, "house."

2. A cognate word *Ai* occurs in the names—

Aai.	Aiberi.	Aaitua.
Unai.	Khataai.	

This might be the Akkadian *Ai*, "mound," *E*, "house;" Medic *E*, "house" (Oppert, "Les Medes," p. 243); Malamir *E*, "temple" (Sayce, "Malamir," p. 103). In Turko-Tartar languages *oj*, *öj*, *ov*, *ev* mean "house." In Finnic languages *au*, *av*, *ou*, *oi* means "to excavate," having the same radical meaning as the Akkadian *E*, originally meaning a "hollow place," "cave," or "lair" (see Donner, ii, p. 91). From this root the name of *Ai* (Josh. vii, 2-5, Jer. xlix, 3) appears to be derived.

3. Another apparent root is *Ara* or *Ari*, as in—

Aari.	Aresa.
Aares.	Arinir.

This may be the Akkadian *Ari*, "flow," *Aria*, "river." In Turko-Tartar we find *Ir*, *ür*, *er*, "to flow" or "melt" (Vambéry, No. 45, p. 42), whence the Yakut *ürak*, "stream." In Hungarian *ar* means "stream" (Donner, i, p. 104), and in Basque *ur*, *ura*, is "water." In Turkish *ایرمک*, *irmak* is "river."

4. Though only twice found, the root *Atr* is very distinctive, as in—

Atriten.

Aternu.

In Etruscan the word *Atrium* is derived from this root, which is the Turko-Tartar *Tur*, “abide” (Vambéry, p. 185); Esthonian *tare*, “hall;” Magyar *ter* (Donner, i, p. 135). In Akkadian *Tir* is rendered “seat.”

5. The root *Un*, or *Aun*, appears in the names—

Unai.

Aunuka.

Unpili.

With these we may compare the Akkadian *un*, *unu*, *unug*, “city;” the Turkic *in*, Tcherkes *unneh*, Wogul *ion*, Etruscan *on*, “city” (“Etr. Res.,” p. 348). In Finnish *huone*, in Esthonian *hõne*, in Lapp *huona*, in Hungarian *hon*, signify “house” or “home” (Donner, i, p. 95). This seems to be the Medic *ummanni*, Susian *umman*, “house” (Oppert, “Les Medes,” p. 244).

6. The Egyptians not distinguishing *l* and *r*, it is doubtful if the next root should be *aul* or *aur*, *aal* or *aar*. Compare—

Aarzakana.

Aarnir (thrice).

Aurpalna.

Aripenekha.

Aarta.

Aurma (twice).

In Akkadian *ur*, *urra*, means “foundation;” *uru*, *eri*, or *aku*, is “city.” The Cagataish *orun* means “place” (Vambéry, p. 57); Turk *اورو* *œuru*, “enclosure.” In the Tartar dialects *l* and *r* are sometimes interchanged. *Aul* is a common Tartar word for “camp;” Tscheremiss *ula*, *ola*, “town;” Mongol *ordu* “camp;” Khitan *woolutu*, Turkish *آولو* *aulu*, “courtyard;” Etruscan *Vol*, *Vel*, “town” or “settlement” (Taylor, “Etr. Res.,” p. 346).

7. The root *Ben* or *Ban* is also clear in the words—

Anaubenu.

Sesban.

Atabana.

Aripenekha

It is, perhaps, to be compared with the Etruscan *phanu*, a “fane;” or with the Akkadian *pin*, “foundation,” *apin*, “city;” Chinese *pin*, “settlement.”

8. The root *Beg*, *Bug*, or *Puk* occurs in the words—

Sutekh-bek.

Pukiu.

Suki-beki.

As the first of these words seems to contain the name of Sutekh or Set—a Hittite deity—Bek may mean a “shrine,” like the Akkadian *ubigi* and the Malamir *bukti* (Sayce, “Malamir,” p. 81). But, as already noted, the

Tartar root *Bek* means "strong," whence the Uigur *bekük*, "a fortress," and this may be the true meaning of the Akkadian and Malamir words.

9. The root *Kan* or *Gan* occurs as a prefix in two names, and suffixed two others—

Tepkenna.	Ganiab (or Kainab).
Shauraganna.	Kaniretu.

In Akkadian *gan*, *gin*, *gun*, *gina*, signifies "enclosure," perhaps the Tartar *jan*, "wall" (Vambéry, p. 112). It recalls the Semitic word for "garden," but where suffixed can hardly be a Semitic word.

10. The word *Kar*, "fortress," is also recognisable in the names —

Atakar.	Karkamasha.
Karmata.	Tsatsakar.

In Akkadian *Kar*, *Kir*, *Khîr*, *Gar*, or *Khar* is rendered "fortress" or "enclosure;" Mongol *Hur*, "enclosure;" Etruscan *Cære*, "town." The Turko-Tartar *Khar*, *Khor*, *Kür*, *Gür*, mean "to surround" (Vambéry, No. 86, p. 81). The Finnic *Kar*, *Ker*, *Kir*, *Kor*, means "round" (Donner, i, p. 48). In Wotiak and Zirianian *Kar* means "town."

11. The word *Aker*, perhaps from the same root, occurs in—

Akershana.

This recalls the Lapp *Aker* and Etruscan *Ager* for a "field" or "enclosure" ("Etr. Res.," p. 333).

12. The root *Khar* or *Khal* is probably connected with the two last. It occurs in—

Khalka or Khalukka (Chalchis).
Khalres or Khailis (Killis or Kharis).

It is perhaps to be compared with *Khal*, "town," as in Medic, Susian, and the Malamir dialects (Sayce, "Malamir," p. 105).

13. The word *Kur* occurs in Tamakur; Akkadian *Kur*, Malamir *Kurkha*, "mountain" (Sayce, "Malamir," p. 104); Basque *Kora*, "high;" Lapp *Kor*, "mountain;" Esthonian *Körge*, "high;" Tscheremiss *Korok*, Votiak *Gurez*, Permian *Keros*, "mountain." (Donner, i, pp. 35, 36.)

14. The syllable *Ma* occurs in—

Aama.	Mauraka.
Khatuma.	Mauthi.
Letama.	Mashaua.
Aurma.	Akama.

Lenormant ("Magic," Engl. Ed., p. 272) says that *Ma* joined to a town name means the region near a town. Lenormant and Delitzsch give *Ma* as an Akkadian word for "country." Mr. Pinches informs me that it is a rare word. In Finnish *Maa*, in Vogul *Ma*, in Zirianian *Mu*, signify "country."

15. The word *Mur* occurs in—

Murlakhna.
Kamurupa (?).

Compare the Akkadian *Muru* and *Murub*, "city."

16. *Pil* or *Pir* is recognisable in—

Piltan.
Aunpili.
Aubillina.

This is probably the Ostiak *Pel*, Andi *pil*, Mongol *Boldek*, Etruscan *Falæ* "mountain" ("Etr. Res.," p. 330). In Samoyedic *filio* means "high."

17. The root *Su* seems to occur in—

Buresu.
Tsaresu.
Tariunsu.

This is no doubt the Tartar *Su*, "water" (Vambéry, No. 167, p. 154), as in the Tschuwash *Su*, "stream;" Turkish *سو*, *Su*, "river" or "water." The same root occurs also in Finnic languages (Donner, i, pp. 100, 157).

18. *Ta* as a suffix is recognisable in—

Tarita.	Abta.
Aarta.	Abata.

It may be merely a grammatical form like the Medic *ta*, Akkadian *da*, forming abstracts; but *Ta* is a widely spread Turanian word for "mountain," occurring as a suffix in names like Altai, Aktu, &c. In Etruscan it appears as *Te* ("Etr. Res.," p. 346); in Turkish as *Dagh* داغ. In Ostiak *tei* means "a peak" (Donner, i, p. 161).

19. *Tama*, a distinctive Tartar word, occurs in—

Tamakua.
Aatatama.
Tamakur.

In Khitan and Manchu *tama* means "enclosure" ("J. R. A. S.," xiii, ii, p. 124). In Cagataish *tam*, *tim*, is "a building" (Vambéry, No. 179, p. 166). In Akkadian *Tami* is translated "shrine," or "building."

20. The root *Tar* seems clearly traceable in—

Tarebu.	Tarita.
Tariunsu.	Tarekh.

This is a common Tartar word for "narrow" or "gathering" (Vambéry, p. 169). Compare the Turkish درد *dereh*, "valley."

21. The word *Tep* occurs probably in—

Tepkenna.

This is probably the Altaic *töbe*, Tchuwash *tübe*, “hill” (Vambery, No. 192, p. 178). Turkish *tepe*, “hill.” It is also found in the Finnish *tüppiära*, *tüpäle*, “a hill” (Donner, i, p. 150); and in the Mongol *dobo*, and Etruscan *Tepæ* (“Etr. Res.,” p. 330).

22. *Tur* or *Tul* is probably to be found in—

Turmanna or Tulmanna.

Turbanda or Tulbanda.

In Akkadian we find *Tul*, “mound;” Hunnic *Tenlo*, Etruscan *Tul*, “tumulus” (“Etr. Res.,” p. 211); but if the word be *Tur* (which is equally probable) we must compare the Akkadian *Tur*, “abode,” and the common Tartar and Turkish root *Tur*, “to dwell,” whence the Turkish *طورمق* *dourmak*, “dwell,” and the Siberian, Mongol, Tartar, and Samoyedic *tura*, “tent” (“Etr. Res.,” pp. 23, 344). In Finnic the word *tur*, “tribe,” is no doubt connected (Donner, i, p. 130), and perhaps the Esthonian *tare*, “abode” (p. 135).

These roots are not peculiar to Hittite, nor do they exhaust the possible Tartar words recognisable in the list in question. The words *Kur*, *Gan*, *Ater*, and many yet more suggestive (*Palanda*, *Atarna*, *Arna*, *Perk*, *Gurus*, &c., &c.), recur again and again in the names of cities in Asia Minor, in Etruria, and even in Iberian Spain, wherever the Tartar stock to which the Hittites belonged, spread itself throughout Western Asia and Southern Europe. (See Hyde Clarke, “Inhabitants of Asia Minor,” 1865.)

(4.) Grammar.

Before proceeding further, it is necessary to consider for a few moments the probable grammar of the Hittite language, by aid of the hints obtainable from the preceding lists, and through a comparative study of the grammars of Tartar, Ugric, and ancient Turanian languages. Languages and writing grow together. The earliest stage, in which grammar hardly existed, would be expressed by picture writing. Agglutinative languages can be expressed by hieroglyphics, but this is not the case with inflected languages, which require syllabaries, and which are best expressed by the alphabet. Thus a hieroglyphic system belongs to an agglutinative language; and to such an agglutinative tongue the hieroglyphics of Syria and Asia Minor are properly ascribed.

The most distinctive features of Turanian speech are: 1st. Agglutination, or the absence of inflexion. 2nd. Post-positions, or the placing of the root before its agglutinated syllables (though this is not an invariable rule). 3rd. Vowel harmony in derivatives, the weak root or agglutinated syllable agreeing in vowel sound with the noun-verb root. This does not

apply, as a rule, to compound words. In Medic such harmony is suggested by Oppert ("Les Medes," p. 39), and in Akkadian it is clearly visible in the pronouns and post-positions (*see* Bertin, "L'Incorporation Verbale"). 4th. The distinctions of sound are much less precise in Turanian than in Semitic languages. Thus in Medic, Oppert only recognises eleven consonantal sounds, while, in the Tartar languages and in Basque, the interchangeability of various letters is equally remarkable. The peculiarities of the Cypriote syllabary seem to show that the sounds of vowels and consonants were also indefinite in Hittite.

The Medic and Akkadian differ in syntax from the living Turanian languages. The arrangement of the sentence, the position of the pronouns, and one or two other important particulars, show this difference; but the ancient and living languages agree in many equally important particulars, such as the position of the plural, the placing of the verb at the end of the phrase, and the use of post-positions.

In Akkadian, Sumerian, and Medic the order of the sentence is *object + subject + verb*, whereas in Turkish it is *subject + object + verb*. In the more certainly understood Etruscan texts the ancient order seems to be observed. In Hungarian the rule is very variable (Singer, "Hungarian Language," p. 87). In Basque the order is the same as in Turkish (Van Eys, "Basque Language," p. 49).

The use of "packets" in Akkadian, or, in other words, the rule that only the last word in an enumeration takes the case suffix is observable in Basque (Van Eys, p. 45), and it survives to a certain extent also in Turkish (Redhouse, "Turkish Language," p. 165).

The arrangement whereby the defining word (such as the genitive) precedes the defined word, is a distinctive mark of Turanian speech, but in the ancient languages the rule is not inflexible. In Akkadian we find the genitive both preceding and following, and the genitive affix is in the first case omitted, but added to the genitive when it follows (*e.g.*, *Ma-ir*, "city of the ship;" *Damkina*, "woman of the earth," &c.). In Medic, also, it is found that the genitive may follow or precede, and when it follows, the genitive suffix is attached to it (Oppert, "Les Medes," p. 106). In Turkish there are four possible arrangements. The genitive with its suffix sometimes precedes (Redhouse, p. 163), and this is also the case in Basque (Van Eys, p. 46).

In Tcheremiss the genitive, without case affix, precedes its nominative, as in Medic. In Votiac it is placed indifferently before or after ("Magic," Engl. Ed., pp. 284, 285). In Hungarian the prefixed genitive without mark of case also occurs (Singer, p. 10).

In Hittite the genitive appears in some cases to precede without any case suffix (*see* *Kheta-sar*, "Chief of the Hittites;" *Khataai*, "House of the Hittites;" *Sutekh-bek*, "Shrine of Sutekh"). In other cases it seems to follow (as is clear from the bilingual boss), which may lead us to render *Aurpalna*, "City of the Chief;" *Turmanna*, "Camp of the King," the final *na* being the case suffix. In the cases *Turtisebu* and *Akitisebu*, the prefixed word appears to have an affixed particle, *ta* or *t*, which is

either a case ending or the sign of the abstract (*ta* in Medic, *da* in Akkadian).

The position of the adjective is also very variable in the languages under consideration.

In Medic the adjective follows its noun, but in the earlier Akkadian it appears sometimes to have preceded it. In Chinese the adjective precedes the noun (Max Müller, "Science of Language," 5th edition, p. 122), and Lenormant regards this as the more ancient Turanian structure. In Turkish all the adjectives precede the noun and remain uninflected (Redhouse, p. 68). In Basque, on the contrary, the adjective follows, and Lenormant has pointed out ("Magie," French Edition) that this archaic language much resembles Akkadian in structure. In Hungarian the adjective may follow or precede, but when preceding remains invariable (Singer, p. 26). Judging from the words *Gallu* and *Lugal*, it would seem that the prefixed adjective may also have occurred in Akkadian. The signs *a* and *ga*, and *li*, are adjective affixes in Akkadian, and in some living tongues, when the adjective follows the noun.

The lists under consideration seem to show that in Hittite, as in Hungarian, both positions are possible for the adjective. Khalukka may mean "great town" (*ukka*, "great"), but Galbatus might mean "great ruler" (*gal*, "big"); Aunpili, "mountain town," may present an adjective, *pili* from *pil*, "a hill." Tamakua, "lofty building;" Lalli ("princely") and Tarkhulara are other possible instances of Hittite adjectives. When preceding the noun, we see, from what has been said above, that the adjective would probably present no affix, but consist simply of the root.

Gender, properly speaking, does not exist in the languages to be considered. Even the pronouns have no gender in Akkadian or in Turkish. There is no gender in Basque, Hungarian, or Turkish, or in Akkadian or Medic. The sex may be distinguished, in some cases, by a prefix, like the Hungarian male prefix (Singer, p. 82) for animals, or the Turkish female prefix *dishi* (Redhouse, p. 51). In Akkadian there appears to have been a male affix (e.g., *lu-nit*, "sheep-male"), like the Hungarian female affix *ne* ("wife").

The position of the plural is the same in the ancient and in the living languages, but the words used for plurals are very various. In Medic the plural affixed to the root precedes the case suffix (*Ain-ip-irra* "of the Kings"), and the same order occurs in Hungarian and in Turkish (see Sayce, "Malamir," p. 72, Singer, p. 14, Redhouse, p. 51). I believe that this was clearly the case also in Hittite (see the second word on the first Hamath stone when the plural precedes the termination *li*).

The position of the verb at the end of the sentence distinguishes the languages under consideration from the Semitic and from the Egyptian.

The root, properly speaking, appears to be the imperative, as in Turkish, and the noun may be either the root or may take an affix, such as *Ak*, *Pi*, *Es*, representing the agent or distinguishing the case. From one point of view there is no true verb in the ancient languages, and the

tense is said by some scholars not to be distinguished in Akkadian. In Basque the past tense is distinguished by an affixed *n* and the infinitive is unknown (Van Eys, p. 47). In the earlier languages the passive is represented by the auxiliary *du*, "come" or "become" (literally "go," as in many early languages—Max Müller, "Science of Lang.," 5th ed., p. 339), and the active by *ma*, "be." The auxiliary, with these exceptions, precedes the verb in Akkadian, which is not the case in the later living languages. A reduplication of the root is said by Max Müller to be frequently used for the past. Such re-duplication occurs in Akkadian (e.g., *gangam*, *dudu*, &c.), but does not seem to have been recognised as a mark of tense. The adverb and the adjective are the same in Turkish (Redhouse, p. 73), and were no doubt indistinguishable in the ancient languages. The periphrastic construction, which Lenormant considered a striking peculiarity of Akkadian ("Magic," Engl. Ed., p. 278), occurs in other languages of Turanian origin, as, for instance, in the Basque (Van Eys, p. 34).

The syntax of the verb and the positions of the pronouns are of special importance to our enquiry.

In the more modern languages the verb is conjugated, the personal suffix following the root, but in the ancient Akkadian this is not the case. The pronoun there precedes the root, just as it does in Basque, without personal suffix. Lenormant remarks that the old structure, with a simple verb root, preceded by the governing pronoun, still exists in Mongolic and in the Manchu-Tartar.¹ In Chinese, also, the governing pronoun precedes ("Magic," Engl. Ed., p. 285).

In Medic we find the order of the transitive verb to be governing pronoun + governed pronoun + verb (*U-ir-halpiya*, "I him killed"), which is the same as in Akkadian. In Basque the order would be "him killed I," and in Turkish "I him killed-I." In Etruscan the order is not so clear, but appears to have been "him I killed." In Hittite we may expect the pronoun to precede the simple verb root, and the governing pronoun probably preceded the governed, as in Akkadian or Medic.

The pronouns are very constant parts of speech in these languages. Being originally nouns the words came with the advance of language to be used as demonstratives, and then specialised as pronouns. M. Bertin has shown this in the case of Akkadian ("L'Incorporation Verbale"), and it is also noted in Medic and in Basque (Van Eys, p. 16). The possessive pronoun is affixed to the noun in Akkadian and in Medic, just as in Turkish, in Hungarian, or in Basque.

The position of the numeral is very constant. It precedes the noun, and the ordinal, &c., are distinguished from the cardinal by affixes.

The use of post-positions instead of prepositions is one of the distinctive features of the languages under consideration. These words, as will

¹ Dr. Oppert conjugates the Medic verb. Dr. Sayce disputes this ("Malamir," p. 77). The Basque retains the old structure in the intransitive verb, which has no personal suffix (Van Eys, p. 21).

appear later, are wonderfully constant in the various languages. There are, however, certain preposed syllables (such as *gik* and *pir*) in Medic which appear to be intensitives. These are to be compared with the Turkish intensive prefixes to adjectives, and are said by Lenormant to be also traceable in Ostiak, Hungarian, Lapp, and Esthonian. The pre-cative or exclamation is also preposed. The conjunction naturally is not.

Two preposed syllables in Akkadian and Medic are regarded by Lenormant as unknown in later languages. One of these is *It* or *Id*, supposed to mark locality; the other is *ki*, which is apparently nearest to the English "as" or "who." In Turkish *ta* and *ki* are suffixes of a somewhat similar character. In Hungarian *az* prefixed is the definite article.

These notes give us a fair idea of the probabilities of Hittite grammar, and it will appear that the evidence of the texts quite agrees with the general principles laid down.

(5.) *The Syllabaries.*

The sounds belonging to the Hittite emblems are to be recovered mainly from the Cypriote and other allied syllabaries. This is generally admitted, but a few general remarks may be necessary.

The syllabary as a rule gives us only one sound for one emblem. Now as regards at least the strong or noun-verb emblems in the Hittite, it is evident that they would have been connected (just as is the case in cuneiform) with more than one sound. It is improbable that the language could have been so poor as to possess only one word for any object, and indeed the evidence of the lists just consulted proves that this was not the case. It is pretty clear, therefore, that more than one sound may have survived in syllabic forms derived from a hieroglyph, and the case will be considerably strengthened by the discovery of two or more syllables having a common origin. Thus the Cypriote *pi* has the same form as the Carian *s*, both being derived from an emblem which appears to have been a personal suffix in Hittite.

On the other hand, more than one emblem is used for certain sounds in the Cypriote. There are two forms of *Le*, of *Pe*, and of *Pi*, which it is almost impossible to regard as derived from one original hieroglyph. The reason is found in the well-known fact that in Tartar languages, as in Chinese, roots of very different meaning have often the same or very closely similar sounds.

The Cypriote syllabary as at present known consists of fifty-four open syllables (*i.e.*, single consonants followed by single vowels), to which it has been proposed to add four closed syllables—*nos*, *man*, *gon*, *ros*. The existence of these four last appears to me to be more than doubtful. In the use of the syllabary by the Greeks double consonants are not represented (*ll* is *le*, *mm* is *me*, *gk* is *ke*, &c.), whereas closed syllables would have enabled the writers to overcome this difficulty. In many cases the *n* is omitted (*A-to-ro-po-se*, for *Anthropos*, &c.), and it will be noted that

three out of the four supposed close syllables include this letter. They may, therefore, I believe, be quite as properly read *os* (or *so*), *ma*, and *go*. As to *ros*, its existence is still problematical.

The sounds of the syllabaries are as indefinite as were those of the language originally represented. K, C, G and Kh are not distinguished, nor are T and D, or P and B, or M and V, while there is good reason to suppose that L and R were occasionally interchanged. All these sounds are equally indefinite in Akkadian and in Medic, as also in the living Tartar dialects. The vowel sounds appear also to have been indefinite. Thus the emblem *Mi* had also the sound *Me* or *Ma*, as we see clearly from its use to spell the Semitic word Melek or Malak.

In Cypriote the inverted vowel sound is not found, but the original hieroglyphs—at least in the case of the weak roots—probably possessed such inverted sound. Thus, in Akkadian, the third pronoun appears as *Na*, *Ne*, *Ni*, *In*, *En*, *An*, in accordance with the law of phonetic harmony, while such words as *Um*, “flame,” and *Mu*, “burn,” give a similar inversion. So in Tartar languages the inversion is commonly found.

The final *n* and *m* are weak letters very often dropped in both the ancient and the living languages. Hence, even in spelling Greek, we find these letters dropped as finals. They may often have belonged to the original hieroglyph, and in certain cases, such as the short *a*, *e*, *i*, which are used also for *an*, *en*, *in*, it is legitimate to restore the *n* to the hieroglyph.

The Hittite system appears to have consisted of about 120 emblems, and the syllabaries would thus allow of our recovering about half the sounds. The other half may have been closed syllables, or even polysyllables, which would account for their disuse in a late syllabic system.¹

The emblems may be divided into strong and weak roots or noun-verbs, and attached grammatical forms. I have already pointed out that the suffixes on the texts are generally smaller than the noun-verbs, and the packets indicated by single emblems and by phrase dividers. The sounds may be taken in order as follows:—

(6.) *Weak Roots.*

These prefixes and suffixes are more valuable than the nouns, because of the greater frequency of their occurrence and because of the grammatical indications recognisable in their relative positions.



































































Aa, *Ya*, *Au*.—Emblem, a vase. In Cypriote it has all three values. In Carian it stands for *a*. In Akkadian *a* means “water.” Susian, *a*. Vogul, *ya* or *ye*. Zirianian, *ya*. The emblem occurs more than forty times in Hittite texts, and may at times be a noun, at times an affix. So in Akkadian the emblem *a*, originally representing water, is used not only for the noun but also for the participle termination *a*. In twenty cases the emblem on the Hittite texts appears to be a prefix

¹ Thus in the Medic and other simple systems we find about half the emblems to be open syllables and half closed.

at the top of the line, in eight it is in the middle, and in twelve at the bottom, but when at the top it is sometimes part of a suffix of a word occupying two columns (as in the earliest cuneiform texts). In sixteen cases we find the group *a-ne* or *an*, perhaps like the Etruscan termination *an* for the participle ("Etr. Res.," p. 287); *an* or *van* is a common participial form in Akkadian, in Media, and in Turkic, Mongolic, and Finnic languages. In Hungarian *Van*, "to be," is used for the auxiliary "to have" (Singer, p. 10).

The emblem appears also to occur for a noun in the names of deities on the Hittite texts.

WEAK ROOTS.

- 1     *ya*  *a*     *no*
- 2     *ga*    *th*   *pi, s*
- 3     *ka*     *po*
- 4      *ke*    *er* *ra*
- 5    *lu*  *le*     *sa*
- 6    *me*     *ti*
- 7      *mo*     *os* *zu*
- 8     *ne*     *ak*

Ga.—Emblem, a crook. This is a rare Cypriote sign. In Akkadian *ga* means "turn." In Tartar languages *ag* or *eg* means "to bend" or


"curve" (Vambery, No. 31, p. 27). There are fourteen known cases on the texts. In one the emblem is a prefix, in the rest apparently a suffix. In Akkadian *ga*, *gi*, *gu* is an exclamation—prefixed; as a suffix *ga* forms the adjective (Sayce, "Assyr. Grammar," p. 20, No. 227), like the Medic *iki* and Susian *ak*.



Ku.—The emblem is called a shaduf by Sayce. It appears to be a suffix of case occurring sometimes at the close of an enumeration, or "packet." At Hamath there are thirty instances, but only twelve on other monuments. From some texts it is entirely absent. In Akkadian *Ku* means "to" or "towards;" Medic *ikki*, "to;" Susian, *iki* or *ki*, "with." In Turkish we have the dative *ke*, *ga*, or *ge*; in Hungarian the suffix *ig*, "as far as;" in Basque *ko* or *go* means "from," and *ka* "with" or "at." At Ibreez the text by the god's head begins *Ka-ne*, or *Kan*, recalling the Etruscan *Ken*, "this," which commences inscriptions, and the Akkadian *gan*, "this."

Ke.—The emblem has a phallic appearance, recalling the the Akkadian *Uk*, "male," from which root the affix of the agent common to so many Tartar and Finnic languages may be derived. In Basque the affix of the agent is *-k*, and many Turkish nouns have this termination. It is also observable in Susian and at Malamir (Sayce, "Malamir," p. 74). There are about forty cases on the Hittite monuments, in three of which it seems to be clearly a prefix, recalling the peculiar Akkadian prefix *Ki* already mentioned. It also seems to occur re-duplicated in twelve cases, to be read *Keke* or *Kek*, recalling the Akkadian *Kak*, "to make." In three cases we find a suffix *Me-ke* or *Mak*, recalling the Turkish *mak* or *mek*, which forms the infinitive, the patient, and the participle. In Medic the termination *meske* seems to be of similar value; at Malamir, also, we find the suffix *mak* (Sayce, p. 74). The combination *Ke-ti* occurs once (and perhaps thrice), perhaps the Akkadian *Kit*, "with," Medic *Kutta*, "also." We also find *Ke-ga* apparently as a prefix, like the Medic intensitive *gik*, the Turkish چوق *chok*, "much." The emblem is often suffixed to emblems apparently nouns, such as *Tarake*, *Anake*, &c., on the Hittite texts.

Lu or *Li*.—This appears to be a yoke. Compare the Akkadian *lu*, "yoke," perhaps the Tartar *Il*, *ol*, *ul*, "to bind together" (Vambery No. 42, p. 39). It is always an affix, like the Akkadian *li*, said by Lenormant to represent action done by a person ("Magic," Engl. Ed., p. 272). In Turkish, *lu* and *li* is the termination of adjectives of possession. In Yakut *li* is the adverbial suffix. The nearest English word appears to be "with." In Hungarian *ul* is an adjective ending (Singer, p. 86). This emblem in Hittite occurs more than once repeated in an enumeration, apparently of adjectives or adverbs governed by a case-ending *ka*. There are more than fifty cases of this emblem. In seven cases it is preceded by the plural *me* representing a plural adjective. In four cases we find *ne-li*,

perhaps like the Etruscan *nal*, meaning "he with," as a termination of proper names.

Me.—The emblem consists of four strokes. Its value is derived from the bilingual. It cannot represent the number 4 because it is not a prefix, and it is very improbable that No. 4 should occur frequently on texts where no other numbers are represented. I believe it to form the plural (as in other hieroglyphic systems) like the Susian, Akkadian, and Malamir *me*¹ (Sayce, "Malamir," pp. 40 and 75). There are about thirty known cases on the texts always as a suffix. The combinations *meke* and *meli* are mentioned previously. In two or three cases we find *Me-ti* or *Met*, perhaps like the Turkish *meh*, , which terminates names of actions.

Mo.—The emblem might represent the *Kteis*,² recalling the Turkish  *âm*; Tartar *Am*, *Em*, "female;" Akkadian *um* or *umu*. This emblem occurs both prefixed and suffixed, and seems to be the personal and possessive pronoun "I" and "me." In Akkadian it is found as *Am*, *Im*, *Um*, *Ma*, *Me*, *Mi*; in Medic *U* or *Uu*, "I," and *mi* "my;" Susian *Ma* or *Ua*, "I;" Malamir *mi*, "mine;" Etruscan *ma*, "I" ("Etr. Res.," p. 284); Ostiak *ma*, Ziriarian *me*, Samoyed *me*, "I." It is the Turkish  (-*m*), "my," but in Basque it becomes *ni*, Finnish *ma*, Esthonian *ma*, Lapp *mon*, Teheremiss *min*, Mongol *bi*, Manchu *bi*, and old Japanese *wa*. There are forty-eight known occurrences on Hittite texts, in most of which the emblem is a suffix. Texts occur, however, without a single occurrence which would agree with its use as a pronoun. Thus it is not found in the descriptive texts at Ibreez, nor is it known on seals (except Schlumberger, No. 18). The combination *mu-ne* occurs thrice, perhaps for "I him" or "me he," or perhaps the verbal termination—Medic *van*, Tartar *men*, Turkish *men*, Hungarian *van*, Akkadian *men*; but where it may be prefixed it recalls the frequent Akkadian prefix *mun*.

Ne.—This seems to represent the phallus, and it is the commonest of all the Hittite emblems. There are at least ninety-three occurrences, in twenty-four of which it is clearly prefixed. Thus, at Ibreez, it begins the text behind the King's head. The original meaning "man" or "person" survives in Turkic and Ugriç speech (see the Etruscan *enna*, "Etr. Res.," p. 339). In fourteen cases this emblem is prefixed to the heads of animals on the Hittite texts, but these heads also occur without it. In Akkadian *ni* is often prefixed to the subject (Bertin, "J. R. A. S.," xvii, Part I). There are sixteen cases of *ane* as noticed already, four cases of *neli*, and one case of *nake*. This latter recalls the Etruscan *nak*, Hungarian *nak*, Ostiak *nak*,

¹ *Me* and *Mes* are both plurals, the second perhaps personal.

² It also closely resembles the cuneiform determinative for "female" in its oldest form, which had the value *Muk*, among others.

meaning "to" ("Etr. Res.," p. 309). In this instance *Zu-nák* appears to mean "to thee"—see the Hungarian *nak*, *nek*, "belonging to" (Singer, pp. 9, 12). Also occurs in Akkadian.

In Akkadian *Na*, *Ne*, *Ni*, *Nu*, *An*, *En*, *In*, *Un*, are forms of the pronoun "he," "him," and (as an affix) "his." While the post-position for the genitive or ablative is also *na*. In Etruscan *na* is the genitive suffix. In Basque *-n* is the ablative and the demonstrative or relative pronoun (Van Eys, pp. 15, 16). *N* is the dative in many Turkic languages, and in Finnic signifies "belonging to." In Turkish it is the genitive, and forms the third personal pronoun. In Susian we have *na*, "of," and *ni*, "his;" and in Medic *ni*, "of." The emblem also occurs prefixed to signs of action, as in Akkadian we have *Nigin*, "surround," from *gin*, "enclosure." There can be little doubt that the emblem in Hittite has the same force as in the other languages of the same class, and we have already seen that *na* appears to have been the Hittite genitive case ending in the names of towns.

No occurs only once, and resembles the sign of opposition in cuneiform and in Egyptian. It is a prefix—the proper position of the negative.

Akkadian *nu*, "not;" Medic and Malanir *inne*, Turkish *de ne*, "nor."

Pi or *S*.—The first is the Cypriote, the second the Carian value. There are sixteen or seventeen occurrences always beneath larger emblems, apparently nouns. The emblem seems to represent a pair, and might represent a dual or plural. Compare the Tartar *áb*, "pair" (Vambéry, No. 32, p. 29), the Akkadian *bí*, and the Basque *bi*, "two." The value *S* would also agree, since *S* is a Finnic and Tartar plural probably also recognisable in Akkadian, derivable from a root meaning "to cleave," as is also the dual *áb*. In Akkadian *ib* and *bi*, *es* or *se*, are personal affixes, and *ba*, *be*, *bi*, *bu*, *ab*, *eb*, *ib*, *ub* is a pronoun, "that one" (Bertin, "L'Incorporation Verbale," p. 3), which Lenormant says forms the absolute case ("Magic," Engl. Ed., p. 274), like the Lapp *b* or *v*, for the accusative, Tcheremiss *p*, Samoyedic *p*.

Manchu *be*, and Turkish *bu*, "this one." In the Malanir dialect and in Medic, *pi* is supposed to be the relative (Sayce, "Malanir," p. 91), like the Akkadian *aba*, "who." In Finnish *pi* is the verbal pronoun, Esthonian *b*, Tcheremiss *be*, Yakut *by*, Yenissei and Samoyedic *ba*, "he who." The value *S* may be compared with the adverbial affix, Akkadian *as*, *es*, Tcheremiss *-s*, Lapp *-s*, Votiak *sa*, Mordvine *-z*. In Hungarian *as* or *es* is an adjective termination, and also stands for the agent (Singer, p. 85).

We have already seen that Hittite and other proper names often end in *s*.

Po.—This appears to represent a crook turned the opposite way to *ga*. Compare the Tartar root *Boy*, "to be bent" (Vambéry, No. 227, p. 210).

There are not more than twelve cases, in two of which it may be prefixed. It is perhaps to be compared to the Turkish *bu* , “this one,” or the Medic *appo*, used for the relative (Oppert, “Les Medes,” p. 277).

Ra or *Er*.—The value may be derived from the bilingual. There does not seem to be any clear occurrence at Hamath, and it is absent from some other texts. The emblem looks like a cord or whip—compare the Tartar *ör*, a “rope,” “twist,” or “pigtail” (Vambéry, No. 32, p. 28). There are about fourteen instances on one text (J. I.), and about twenty in all, in which this emblem appears infixed or suffixed.

Compare the Akkadian *Ra*, *Ri*, “to,” “of,” or “towards,” incorporated in the verb. In Medic *Ra*, *Ri*, *Ir*, forms the adjective, the accusative, and the possessive (Oppert, “Les Medes,” pp. 51, 279, 280). It occurs also at Malamir (Sayce, p. 102), and *Ir* means “him” in Susian and Medic. The case meaning seems to be connected with the old verb *Ra*, “go,” the personal meaning would be from the root, *Er*, “man.” In Basque, *ra* means “towards,” and in Hungarian *ra*, *re*, means “upon ;” on the Hittite texts we find the verbs, *In-tu-ra*, “gives to,” and *In-du-ra*, “goes to ;” also in four or five cases, *Ti-ra* or *Ter*, and once *Termu*, perhaps the Malamir *Tar* and *Tarma*, “all” (Sayce, “Malamir,” p. 110).

Sa.—This comparison is due to Professor Sayce. The Hittite emblem seems to be a hook or sickle. *Sa* is a common Turanian word for a cutting instrument, as in the Abase *Sa*, “sword,” Tcherkess *seh*, “knife,” from the root *az* or *aj*, “to cleave” or “open” (Vambéry, pp. 1, 26 ; Taylor, “Etr. Res.,” p. 335). There are some fourteen or fifteen cases of occurrence on the Hittite texts, in none of which it is clearly prefixed. *Ti-sa*, *li-sa*, *ne-sa*, *sa-li*, *sa-ne* all occur. In Akkadian, *sa* means “in ;” Chinese *sa*, “interior ;” Tartar *is üs*, “within ;” *tis* means “interior” (Vambéry, p. xii., and No. 38, p. 35). In Basque, we find *-z*, “with” or “by.” The participial ending in *s* is common to Hungarian, Tartar, and Turkish, and occurs in the Etruscan *as*. This seems to be a case ending in Hittite, *ne sa*, meaning “with him.” *Tisa* may be compared with the adverbial ending *Thasa* or *Thas* in Etruscan (“Etr. Res.,” p. 287) ; and *sa ne* might be compared with *isne*, “then,” in Medic (Sayce, “Malamir,” p. 104).

Ti.—There are two emblems very like yet distinct in Hittite, one an arrow, the other perhaps a spear. The arrow occurs ten times, five occurrences being as a prefix. The spear twenty-five times, eleven probably as a prefix, eight apparently infixed, and six affixed. The Tartar root, *At it*, means “to shoot” (Vambéry, No. 28, p. 25), which agrees with the form of the emblem.

In Akkadian and in Medic the syllables *It*, *Ta*, *Ti*, occur prefixed and affixed with a locative meaning. Akkadian *ta*, “at,” “out of,”

"by" (Bertin, "L'Incorporation Verbale," p. 3; Lenormant "Magic" Engl. Ed., p. 273). *Id* is a localising prefix in Akkadian; *It* or *Iz* in Medic; Etruscan *Eth* a localising prefix ("Etr. Res.," p. 327), and *Th* an abstract termination in Etruscan; Medic *ta*, Akkadian *da*. In Turkish, the locative suffix *ta*, "as far as" or "so that," still exists (Redhouse, p. 156), and *da* is the sign of the locative case "in" (p. 52). The combination, *Ti-ka*, on the Hittite texts may mean "all" or "only," and *ti-ke* might be compared with the Basque *tik*, "of" (Van Eys., p. 10).

It would seem that *Ti* prefixed is a locative, infixed it would form the abstract (compare the Medic *hal-t-ik*, "enmity," from *Khul*, "evil"). Affixed it may be the case ending meaning "in," "at," or "from."

Zu, or *So*, or *Os*.—The sound is not very clear. The value *nos* may be rejected for reasons already given. There is, however, a Cypriote *nu*, which is also similar to the Hittite.

This emblem always appears at the top of the column. When it occurs it is often repeated, but it is entirely absent from whole texts. Both these indications point to a pronoun. There are fifty-eight cases, all occurring in six texts. It is not found at Ibreez, or at Hamath, or on the seals. At Tyana there are twelve instances in four lines, and at Jerabis five instances in four lines, in one text, and ten in four lines, in another text. It appears twenty-two times on the Merash lion, and five times on the Babylonian bowl. There are six known texts from which it is absent. The Babylonian bowl is allowed to be a dedicatory text or invocation, and if so, this emblem might well stand for the second person singular.¹ There are two cases in which it is re-duplicated, which might be the second person plural.

In Akkadian *za*, *zu*, means "thou." In Basque, *zu* is the plural "you" (Van Eys., p. 23), in Finnish *sa*, Esthonian, *sa*, Mongol and Manchu, *si*. In Turkish we find *shu* شو "this" سن *san* "thou" سز *siz*, "you." The latter may be compared with the re-duplicated *zu-zu* (or *so-so*), of the Hittite texts. As in other languages so in Turkish "you," the plural, is often used for "thou," the singular, as a mark of respect (Redhouse, p. 82).

These fifteen signs, the values of which I first determined from the Akkadian, are therefore apparently supported by a further comparative study of the living languages, and it appears to me that, taken with the

¹ Applying the rules here detailed to the Babylonian bowl, I obtain the following approximate rendering: "O may the spell make the God (Ea?) come nigh . . . to thee alone thou King above, thou . . . called enlightener Creator . . . Tamunz . . . fire God the (memorial?) made for thee invokes thee."

answers to the Chinese distinction of "full" and "empty" roots. The arrangement of the emblems in Hittite is just the same as in the earliest cuneiform, except that the words are not divided by vertical lines of separation. The texts are boustrophedon, the emblems usually facing the commencement of the line. The strong roots have much larger emblems than the suffixes. The "packets" are indicated by single case emblems, which follow. The word often occupies two columns in the line. A slanting stroke shows the end of a word or clause. The words do not end always with the line (as is easily proved), which is also the case in Medic and at Malamir, but is said not to be so in Akkadian texts.

An or *Is*.—This emblem, which appears to represent "Deity," I have long supposed to be a conventionalised eye. It is quite possible that it may have had both sounds. The word *An*, for God, is found in Akkadian, Susian, and Medic; perhaps the Turkish $\text{U} \backslash$ *Ana*, "Saint;" Etruscan *An*, *Un*, *Uns*, "God;" perhaps the Tartar *An*, "being." The Eye is an Egyptian divine emblem. The value *Is* or *Si* would recall the Akkadian *Si*, "eye" or "see;" Chinese *Si*, "eye;" Akkadian *Es*, *Is*, *Issi*, "brightness;" Medic *Siya*, "to see;" Tartar *jis*, *is*, "bright" and "light" (Vambery, No. 135, p. 124), this root is much used to signify deity. It occurs in Finnic languages (Donner, i, p. 20; ii, p. 31, 32). The Etruscan *Æs*-ar (plural), the Siberian *Asa*, Yenessei *ais*, *eis*, *es*, signify "God" (Taylor, "Etr. Res.," p. 145). Castren says that *Es* is the word for supreme deity among all Altaic peoples. Altogether there are thirty-two known instances on the Hittite texts, always as a prefix. In one of these it appears to be re-duplicated like the Akkadian *An-an*, "gods."

An or *A*.—Emblem a star. It occurs on seals only as yet. In one case it replaces, on a seal, the last-named emblem in the name of a god, which is a strong argument that the preceding *An* means "deity." The cuneiform *An*, "god," is also from a star hieroglyphic.

Be.—The arm and dagger. Only found nine times, in six cases with the foot (probably for the passive) following. See the Akkadian *Be*, *Bat*, "slay," "die;" Tartar *ub*, "strike," *Bet*, "cut" (Vambery, Nos. 153, 217, pp. 142, 203).

Dim.—On the bilingual. Much resembles the cuneiform *Dim*.

Ko and *Ku*.—Two forms of Tiara. There are more than twenty occurrences. On the bilingual, the tiara has the meaning "king." Another possible value is *Ur*, as in Lycian. In eight cases the emblem is re-duplicated. In one case we find *Tar-ko* (apparently for the name of a god); in another two cases the tiara precedes a king's head, as if equivalent to the re-duplicated tiara. There is also a seal with a king's figure accompanied by a re-duplicated tiara, and there can be little doubt as to the meaning of the emblem.

altar. I believe it to have had a simple vowel sound, and to be perhaps a conjunction. It is sometimes absent from a whole text. Medic conjunction, *ak*, Akkadian *ua* (Lenormant), Turkish *ve*, "and."

As regards the sound, the existence of a word *Ku* or *Ge* for "prince" is admitted by Pinches, Bertin, Fox Talbot, and others, in Akkadian (*See* No. 462 in Sayce's "Assyrian Grammar," p. 40, *cu*, "prince," "precious"); Norris and Lenormant also admit the word in Medic, though Oppert prefers to use other synonymous words. The words *Ak*, *Uk*, *Aka*, are also rendered "king" by various students, the latter occurring in the name of the Hittite king, Akitisebu, and in the Turkish *آكا* *Aka*, "prince." The re-duplication may be compared with the term *Khakhan* applied to the chiefs of the Khozars, west of the Caspian. *Ku*, in Akkadian, also means "high," "bright," "silver," "precious." In living languages we may compare the Tartar *ag*, *eg*, *ök*, "Lord" (Vambéry, No. 30, p. 27), and "high" and "strong" (pp. 6, 9); *ege*, "prince," and other words, from the same root, meaning "bright," "precious," "white," "silvery." In Finnic languages the same root occurs as in the Ostiak *Khu*, "long," and the root *Koi*, "bright" (Donner, i, pp. 1, 9), is perhaps connected with *Ku*, "fat" or "thick," and the Basque *Goi*, "height." In Chinese also we find *Kok*, "high." The syllable in Cypriote has the sounds *Ko*, *Go*, *Kho*; and perhaps *Kha*, "prince," in Akkadian, may also be compared (the common Tartar *Khan*, Chinese *Kon* or *Kan*). As regards the value *Uu*, compare the Akkadian *U*, "Lord." Tartar *uu* or *ou*, "important" (Vambéry, No. 8, p. 9).

Le.—The bull's head. This emblem occurs fourteen times. In four cases *Ne* is prefixed, and in two it follows. Once we have *ā ne* following, and once *er* or *ra*. In Akkadian *Le* is "bull." Other common words are *Gut* and *Khar*, both meaning "bull" in Akkadian. *Gut* is "bull" in Chinese, perhaps connected with the Tartar *Güt*, "mighty" (Vambéry, p. 104). *Khar* is the Finnish *Kirjo*, Vogul *Kar*, *Khar*, *Ker*, *Kher*, *Kir*, "ox;" Tunguse *Sar*, Mongol *uker*, Hungarian *ökör*, "ox." If, as is very probable, this word existed in Hittite, the head may spell the words *Kharra* and *Kharrane*, meaning "high" or "heavenly."

Lo or *H*.—The first is Cypriote; the second, Carian. The emblem is the Cross, which in Chaldea and Etruria was a sacred emblem, and is held in the hand of a god on the so-called Hittite cylinders. It is usually supposed to be a sign of "life," like the Egyptian *ankh*. It only occurs twice. Compare the Akkadian *lu*, "man;" Zirianian *lō*, "spirit;" Tartar *ol*, "to live;" and for the second value the Akkadian *Khi*, "good;" Turkish *إبي* *eei*; Tartar *Khai*, "good."

Man or *Ma*, or *Gon*.—The hand with a sceptre. It only occurs twice. Perhaps connected with *Man*, Akkadian for "king;" also probably Etruscan. It is the Tartar *Mañ*, whence the Yakut *Mana*, "leader;" Finish *Vana*, "elder." *Gon* would mean the same.

Ma(n) or *Ya(n)*, or *Ma* or *Ya*.—This is a rare emblem, perhaps another kind of tiara.

- Me.*—This is a much conventionalised emblem, perhaps a hand. There are thirteen clear cases at Hamath, and one at Ibreez ; but at Jerabis it seems to be replaced by a well drawn hand, occurring with the same group of emblems. As it is generally found at the end of texts or phrases, it would seem to represent a verb root. There is no case as yet in which it is prefixed. Compare the Akkadian *Ma*, “be ;” Tartar *am*, *em*, *im*, “existing ;” and the Turkish *ac me*, for names of actions.
- Mi, Me, or Ma.*—As already noticed, this is a common Turanian word for “country.” Its existence in Akkadian is acknowledged by Lenormant, Delitzsch, and Pinches. (See Sayce, “Assyrian Grammar,” No. 291, p. 25, *ma*, “to dwell,” “plain,” “country.”) There are as yet only three clear cases of occurrence, one being on the bilingual, where it stands for “country.” The emblem represents two mountain peaks.
- Ra.*—There are only two cases. The emblem occurs also on cylinders, and as I pointed out some time ago, this emblem, frequently found in Phœnicia, seems to be akin to the Egyptian ankh.
- Re.*—This emblem occurs about fifteen times. Perhaps to be compared with the root *Ri*, “shine” or “bright,” in Akkadian representing rays of light descending, or as in cuneiform and Egyptian emblems representing “rain,” from *Ri*, “flow.”
- Re.*—A much rarer emblem seems to represent water dropping or pouring. Compare the root *Ri*, “flow ;” Tartar *er*, *ir*, *ur*, “to flow,” as already mentioned in Section 3.
- Ri.*—This emblem, which I have supposed to be perhaps the fire stick (*bil* or *bilgi*¹), occurs on the Babylonian bowl as the name of a god. Compare the Akkadian deities *Ri* and *Ira*. It only occurs five times, in four instances of the same word, and in the case just mentioned. In Akkadian *Ar*, *Ir*, *Ur*, means “light,” “fire,” “heat ;” the Tartar *yar*, *or*, *uor*, *ör*, “to glean,” “burn,” “shine” (Vambéry, No. 128, p. 117), and *Ri* means “light” or “brightness” in Akkadian.
- Se.*—The hand. There are only a few cases. Akkadian *Sa*, “put,” “give,” “have ;” *Saa*, “favourable ;” *Se*, *Si*, “give.” Tartar *aja*, “the open hand” (j and s being convertible) ; *aj*, *ej*, “favourable ;” *es*, “lucky” (Vambéry, pp. 1, 3, 4), *sau*, *sau*, “to take” (p. 157).
- Su.*—There are only four cases. An arm holding some kind of stick or cord. Perhaps to be compared with the Akkadian *us*, “king ;” Tartar *ös*, “lord ;” *us*, “great ;” *us*, “master” (Vambéry, pp. 27, 57, 62).
- Tar.*—This emblem of the deer’s head stands for Tar, or Tarku, on the bilingual. In Akkadian *Dar* or *Dara* means “deer.” In Finnic we find *sordev*, “stag,” from *sor*, “horn.” There are about ten occur-

¹ *Gi* means “flame ;” compare the Finnic *keo*, “hot,” *kaila*, “flame,” Tartar *köö*, “burn.” *Bil* I propose to compare with the Tartar *bil*, “to rub” (Vambéry, p. 198), so that *Bilgi* would mean flame made by rubbing with the firestick.

rences of this sign, once as the name of a deity (Tar or Tarku) on the Merash lion.

Ta.—The hand holding a stick. This is a rare emblem. On the Hamath stones it occurs, followed by *ne*. Compare the Akkadian *Da*, "drive;" *Tan*, "power;" Chinese *Ta*, "noble;" *Tan*, "hero;" Uigur *ite*, "master;" Cagataish *tay*, "power;" Finnic *tan*, *tun*, *ten*, "strong." (Donner, i, p. 143.)

Te.—Emblem an herb. Compare the Akkadian *Ti*, *Til*, *Tin*, "life;" *De*, "move;" Tartar *at*, "move;" *Tin*, "life" (Vambéry, Nos. 27, 39, 186, 189); Turkish *تيمک* *itmek*, "to sprout," *اوت* *ot*, "herb." There are about 13 clear cases on the known monuments never apparently prefixed. The group *Ni-te-li* at Ibreez may mean "living." *Te ne* also occurs (Akkadian and Tartar *Tin*, "life").

To.—The hand in attitude of taking. There are only six clear cases. Compare Akkadian *tuk*, Medic *Duni*, "take," "give;" Etruscan *teke*, "give;" Tartar *Tek*, "touch" (Vambéry, No. 173, p. 159); Finnic *Tuk*, "touch" (Donner, i, p. 109). The Akkadian *tu*, "make," is a common Ugric and Tartar root no doubt connected.

Tu.—The hand pointing downwards. There are only two clear cases, Akkadian *Tu*, "down," "descend," "death;" Turkish *دون* *down*, "down," "below."

Vo.—A head on a stalk. Dr. Sayce renders it "pray," or "worship" (*kue*). It may have the value *gu*, and *Vo* (or *Mu*) as well. The emblem usually stands alone at or near the end of a packet, or of a text, so that it would seem to represent a verb. There are about 17 clear cases. As yet it is not found on any seal. Akkadian *Mu*, "name," "call;" *Me*, "speak." Tartar *oñ*, "cry" (the ringing *n* being often put for *M*. Vambéry, No. 54, p. 49.) Akkadian *gu* and *ka*, "say," "word" (the *K* and *M* are often interchanged.) Tartar *ig*, *iau*, "cry;" *kui*, *kuj*, "voice" (Vambéry, pp. 106, 129, 130). Finnic *kï*, "speech;" *juoi*, "call." (Donner, i, pp. 58, 102.) The combination *voka* or *guka* occurs five times ("word for," or "name for;" *Vo-me-ka*, three times ("words for," or "crying to,")) and *Ne vo* (a verbal form), once, *Vo li* (or *gu-li*) the participle once, and *Mo-vo*, "I say," twice.

U or *O*.—Emblem, the firmament. Dr. Sayce calls it the emblem of supremacy. The sound here given is taken from a Carian emblem. Other possible sounds would be *ub*, *Pa*, and *Pak*. There are about twenty known cases, in thirteen of which it is a prefix. On the new Gurnun text it seems to occur several times above the emblem for deity.

Akkadian *u*, "day;" *ub*, "heaven;" *pa*, "sky," perhaps the Tartar *u*, *uv*, *up*, "curved"—the vault of heaven.

Zi or *Zo*.—Emblem, perhaps the lightning. The exact sound in Cypriote is doubtful. There are ten clear cases. In one instance it is the name of a god. Akkadian *Zu*, "live," "grow;" *Zi*, "life," "spirit," "flow;" Tartar *uz*, "grow," *Is*, *es*, *us*, *os*, "flow," "fly," "spirit." (Vambéry, No. 40, p. 37, and p. 57.)

These lists do not exhaust the notes of comparison which I have collected, but are sufficient for the present purpose of showing how the sounds of the Hittite language may be recovered and compared. From the name lists we here recover 34 words, and several indications of grammar and from the texts themselves 40 roots, without counting derived words or compounds. I believe at least 100 Hittite words in all are recoverable from the materials at our command. It appears to me that it is necessary for those who may feel inclined to criticise these results,¹ not merely to select a word here or there, but either to show some radical fallacy underlying the system, or to give some alternative comparison capable of being better adapted.

I have reserved for the present the results of a careful comparison with cuneiform and with Egyptian. I believe in 38 cases, Hittite and Egyptian emblems have the same form and meaning, and out of these in 12 cases the same, or very nearly the same sounds. In 38 cases also the Hittite and cuneiform form may be compared, and in 18 cases out of these not only form and meaning, but sound also is the same—the sounds being of course independently obtained.

I agree with M. Bertin, and other scholars, in supposing that Hittite, cuneiform, and Egyptian, had a common origin in an ancient picture-writing system, from which the Chinese also developed. I believe this to have originated somewhere near the Caucasus among Turanian tribes, and to have been adapted to an African language in Egypt, just as to a Semitic language in Chaldea; but since the “weak roots” have independent emblems in the three systems, I think they must have separated and developed independently from a remote age before the original language had advanced to the agglutinative stage.

I further believe the Semitic alphabet to be demonstrably derivable from the Hittite emblems, the chief reason being the use in Carian and Lycian, &c., of a transitional system; for it is contrary to ordinary paleographical experience to suppose (as scholars are now obliged to do) that a mixed alphabet can have existed derived from two distinct sources.

C. R. CONDER.

¹ The only criticisms as yet (by Dr. Sayce and others) have had respect to details. I have answered these fully in “Altaic Hieroglyphs” (second edition), and in *Palestine Exploration Fund Quarterly Statement*, 1887. I have modified former proposals in this paper in five cases, and have added nine new comparisons, increasing the number of sounds recovered from 31 to 40. Space does not allow of giving the lists which I have prepared, comparing Akkadian in about 400 cases with Tartar roots, in 200 with Turkish, in 70 with Medic, and in other cases with Ugrie, Finnic, and Mongolic languages, and with Chinese and Etruscan. There are at least 150 Tartar words in Egyptian, and these, as a rule, occur in Akkadian also. My list of restored Hittite words exceeds 100 in all. The question of the comparison of the three hieroglyphic systems I hope to treat elsewhere in a separate paper. The question of the origin of the Alphabet is also published separately.

Corrections and Notes.

The proof of the "Hittite Language" having been submitted to various scholars for criticism, I have been favoured with their remarks on details, and add the results as far as they have reached me.

Bulug, "division," is regarded by M. Bertin and Prof. Sayce as a Semitic word. The root, however, is common in Turanian speech. *Zab*, "soldier," is also considered Semitic by M. Bertin.

Nautab is more correctly *Natub*, according to Rev. H. G. Tomkins, who also objects to *Kharab* (*Khalebu*), and to *Ganiab* (better *Kainab*). *Buresu* is otherwise read *Suresu*, but the inscription is here injured. *Tamakua* is perhaps more correctly *Tzemauka*.

Li, given by Lenormant as an adjective termination, is not accepted by M. Bertin; *U* or *Ua*, "and," is read *Su* by Prof. Sayce, but this is still apparently doubtful.

As regards the termination *meti*, in Hittite, I may add that *meta* occurs, meaning "being" in Akkadian (Bertin on "Assy. Pronouns," p. 19), which strengthens my case.

There is of course a good deal of doubt about some of the words given as Akkadian on the authority of Lenormant, Delitszeh, and others. M. G. Bertin has kindly looked through these words, and doubts especially—*Pakh*, "king;" *Pis*, "hero;" *Zana*, "superior;" *alu*, "city" (probably Semitic); *us*, "King;" *Tu*, "down." He also reads *lu* for *le*, "bull," and queries other words; but by the system used in this paper the uncertainties of Akkadian are often overcome.

C. R. C.

RECENT DISCOVERIES.

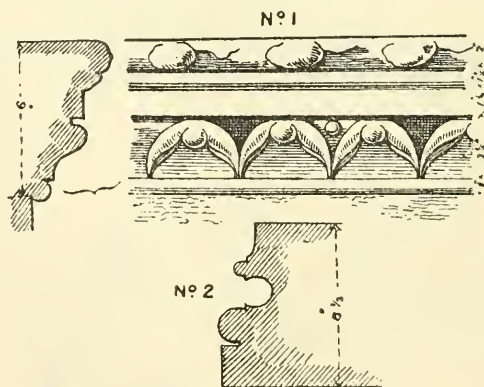
Lejjûn.—At Lejjûn, this ancient Roman place of the Merj ibn 'Amir (Plain of Esdraelon), the following Greek inscription was found, unfortunately not complete:—



The inscription is engraved on a soft white limestone, surrounded by a cornice.

Haifa.—At the west of the German colony at Haifa, near the modern Jewish cemetery, in an abandoned garden, covered with quicksand, several large sarcophagi covers of sandstone were discovered after the upper layers of the sand were transported on wagons to the gardens of the colony. The sarcophagi covers, herewith sketched, had an average length of 7 feet 1 inch, an exterior width of 2 feet 11 inches, and a height of 1 foot 11½ inches. The sarcophagi themselves, or rather the graves, were formed by nicely hewn sandstones of large size, up to 6 feet by 3 feet, and masoned together so as to form a grave of rectangular form, sufficient in size to be covered by the top slabs sketched. Each of the three top slabs had on each corner of its sloping top a horn, 11 inches high, 8 inches in diameter, which gave the whole a suitable ornamentation. The interior of the graves were somehow plastered with a good covering of white mortar. The workmen, who were busy in destroying these ancient remains and cutting them into building stones of such size as to be transportable on camel's back, pretended that they had also dug out human bones, which I saw no more. This place and vicinity (see "Memoirs of Palestine Exploration Fund, Haifa," Vol. vi, p. 303) must have been an ancient Jewish burial place, as seen from the data mentioned by Benjamin of Tudela, &c.

Kefr Kenna.—The annexed sketch, No. 1, represents an ornamentation found at Kefr Kenna by the Superior of the Latin Convent there; it is carved in the so-called Nâri (a soft crumbling lime) stone, and as so very



few ancient remains are found at this place, may be of some interest; No. 2 was also found here, and seems to be the attic base of a column, while No. 1 is the top of a crowning cornice.

Mâ-mâs.—At the Roman Theatre of Mâ-mâs, I found these **H R K** mason marks. The greatest part of this ruin is carried off and overbuilt.

Tiberias.—The surface of the Lake of Tiberias is 5 feet 1 inch *lower* than it was in February, when I marked its height on the city wall, at the time of heaviest rainfall. The inhabitants of the city are surprised of this low stand of the lake, it being the lowest since many years, and was caused by the dry season and the relative poor rainfall of last winter. The Jordan, near Bâb et Tumm, at its outflow out of the lake is only knee-deep, while in March last I crossed the river in a boat, measuring a maximum depth there of nearly $6\frac{1}{2}$ feet. The springs also, throughout Galilee, but especially in the district of Tiberias, became unusually poor, and many dried up totally; so for instance, the large town of Lûbieh and of Nimrîn are obliged to get their entire water supply, since September last, from the powerful but distant spring of Hattîn, at a distance of 4 and 2 miles respectively. At Nazareth the want of drinking water becomes most urgent, as even the good supplying spring at Kerm el Emîr could no more answer the wants of thousands, not a drop being left any more to irrigate the gardens below. Foreigners, who were not happy enough to have friends, found nobody, not even for money, to water their animals. In Northern 'Ajlûn, where the cisterns became empty during September, and no spring was near, the want of water became a burning question. A Mukâri (muleteer), loaded with dry goods from Damascus, told me that he wandered about in Northern 'Ajlûn for three days without finding a place to water his animals, he himself suffering most terribly from thirst, as no villager allowed him to have a drink until he finally forcibly seized a "kirby" (leather bag) of water from an old woman to answer his wants. Considering that declining to hand a drink of water over to a stranger is about the last thing that is expected by an Arab, and is throughout considered as an action of the basest kind, the state of water wants in 'Ajlûn must have been very very high indeed. Several rainfalls during the last weeks have raised this question to a supportable degree.

Shefa 'Anîr.—In the south of the town, just below the small castle, el Burj, and near where the officers of the "Fund" had found and described tombs, other tombs along the road were discovered. They were so well shut by stone doors that their existence had hitherto escaped the eye. They generally contain three to four koka, and show here and there on the walls Christian emblems and crosses. Human bones and copper bracelets, and some lachrymatories, are said to have been found, but carried off by a monk, who happened to be near at the time of discovery.

Athlît.—This crusading castle has been bought privately by H. E. the Governor-General of Syria, who intends to pull down the dirty fellahin houses, and part of the ancient remains, and to rebuild a proper village, to drain the marshy land, and to cultivate gardens. While surveying this part I was surprised by the abundance of old cisterns along the low hills of Athlît, the large sandstone quarries (el Makatiyeh), and the remains of irrigation canals and basins within the jungles of "Tarfa" or Tamarisks. The total area of the property belonging to Athlît measures 54 feddans (among which 33 of cultivated soil), or each government feddan, measuring 200 dunnams, about 10,800 dunnams = 2,340 English acres. Many

ancient remains may be brought to daylight by this desirable act of civilisation.

Sûrafand.—Last week fishermen from this village caught a young sea-calf in their nets while fishing in the sea and brought it ashore ; the cries of the young animal soon attracted its mother, which also appeared and was killed by gunshots ; this animal very seldom appears in this part of the Mediterranean, and I immediately sent for its remains, but, unfortunately, the young calf had since died, and the meat of the other was entirely eaten up by the villagers, who pretended it to be of the taste of the best salt-water fish. All I could obtain was part of the skin, a very smooth hair-skin, much finer than that of a cow, and speckled white and dark brown. The calf is called *Kelb-bahr* (sea-dog) by the natives.

Haurân.—I have just been informed that near es-Sunaneim, in Northern Haurân, near the Lejjâh, a great fight has taken place between the 'Arab-el Lejjâh Bedawîn and the Druses of Jebel Haurân. Government soldiers, well armed, numbering several hundreds, attacked the Druses, who had unfairly commenced the fight, and were naturally supported by the Bedawîn. Up to now about 150 Druses were killed, and about 300 wounded, the loss on the other side was not severe. As the Druses had also lately killed the young son of a Kurdian Emir of Damascus, while the innocent boy took a ride on the Merj, an action which nearly gave way to a general rise among the Kurds of Damascus, the Government is severely considering the question of a large expedition to pacificate the revolting Druses of Haurân.

G. SCHUMACHER.

Haifa, *November*, 1887.

NOTE.

A FEW days ago a friend, who is staying with me here, in the course of an excursion to the "place of burning" and the Tell el Kassîs, found, about 200 yards from the base of the mountain, on his way to the latter place, a chipped flint arrow-head. It was especially interesting to me, as the spot at which it was picked up is only about a mile from the "fort" which I discovered about four years ago, called El Kul'at, and which I observed at the time in my article on "The Khurbets of Carmel," bore all the appearance of a pre-historic period. As on the occasion of my previous visit, the day was closing in too rapidly to enable me to give it the attention it deserved, I re-visited the spot a few days ago, thinking that I might possibly come across some more flint implements ; but these are curiosities which one never finds when one is looking for them. I took the opportunity of making a rough sketch of the fort, and of part of the ancient wall, which is composed of large unhewn stones laid upon one another. The circular area inside is 82 feet by 75. The position must have been a very strong one, as it presents a precipitous face to the plain, above which it is situated about 300 feet, while in

rear the flank of the mountain is quite inaccessible. It is connected with the mountain by a neck of land, on which are the remains of some ancient ruins, and is approached from the side.

I have also been able to decipher the only inscription I have yet found on Carmel ; it is over a rock-tomb at Kh, Raktiyeh (*see* article on "Khurbets of Carmel," *Q.S.*, p. 30, 1884), and is as follows :—

"MAPEINOY MNHMEION,"

on the tomb of Marinos, evidently from the crosses cut below the name, a Christian. It is interesting as showing that until the conquest of Palestine by the Moslems, these rock-tombs were used by Christians.

LAURENCE OLIPHANT.

August 2nd.

BOAT-SHAPED GRAVES OF SYRIA.

In the *Quarterly Statement* for October, 1887, I described some boat-shaped graves which I saw in the Anti-Lebanon. In the *Quarterly Statement* for January, 1888, Captain Conder suggests that these graves should be compared with the anthropoid sarcophagi of Phœnicia, and with the wooden mummy cases in Egypt. "The form," he says, "follows that of the human body." If he means the form of the anthropoid graves of Phœnicia, why, of course it does ; but if he means the form of the graves which I described, I must say distinctly that it does not. The form is boat-shaped, and not human-shaped. Captain Conder apparently has not seen the graves, and has not seen my drawings.

I observe also Captain Conder's present opinion, that "Charon was probably not connected with Horus, but with the Etruscan Charun, 'the black (or evil) god' of death." I did not mean to assert on my own authority that Charon was connected with Horus. I mentioned that a carnelian scarab found at Amrit, in Phœnicia, exhibits a ship with the sun above it, and letters which Perrot reads as Kheb, but which Captain Conder would read Kher and regard as the Semitic spelling of Horus. I said, also, that in the boat which was brought up to the lake side in the funeral ceremony in Egypt the boatman's name was Charon, and both Charon and his boat were adopted by the Greeks. This statement rests on the authority of Sir Gardner Wilkinson, who quotes Diodorus, and adds that both the name and character of Charon are taken from Horus, who had the peculiar office of steersman in the sacred boats of Egypt.

GEO. ST. CLAIR.

THE CITY OF DAVID AND ACRA.

In the *Quarterly Statement* for 1886, p. 27, I stated that Josephus described the part north of the Upper City (the Acra of Sir Charles Warren and Captain Conder) as the *suburb* (*προάστειον*), but I omitted to point out the evidence.

In reference to this part Josephus says (Wars v, iv, 2) that the second wall only encompassed the northern quarter (*τὸ προσάρκτιον κλίμα*). But again in reference to a particular part of Jerusalem, Josephus speaks of it as the northern quarter (*τὸ προσάρκτιον*) in Wars i, xiii, 3, but as the *suburb* in the parallel passage in the Ant. xiv, xiii, 4, thus identifying the two. With this agrees the statement in Ant. xv, xi, 5, that two of the *western* gates of the temple led to the *suburb*; inasmuch as the part north of the Upper City was on the *western* side of the temple.

Thus Josephus places the *suburb* north and the Acra east of the Upper City, on Ophel (so called, 1886, 27), hereby unconsciously admitting that Ophel was the site of the City of David. This is clear, since Josephus identifies his Acra with that of the Maccabees (Wars v iv, 1), which was the City of David (1. Macc. 1, 33), which was on Ophel (Old Test., 1885, 100). The City-of-David-question is really as clear as noon, and as easy as A, B, C, until Josephus' guesses at truth are weakly taken to be truth.

For critics in search of the true position of the City of David and Acra, it seems indeed an odd device to disregard entirely the Old Testament and to go to Josephus for its City of David, and to modern theorists for his Acra; instead of going to him for his Acra, and to it for its City of David. My topographical opponents are welcome to confide in Josephus or not, as they like; but it is nothing less than infatuation to *believe* him when he contradicts the Old Testament, writing of what he may have heard, read or thought, but certainly had not seen, and then to disbelieve him when he writes of what he had actually seen.

W. F. BIRCH.

ERRATA.

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- October, 1887.—Page 210, line 9, *for* Tibnite, *read* Tabnite.
 „ Page 210, line 15, *for* Dodorus, *read* Diodorous.
 „ Page 213, line 37, *for* 6 in plan, *read* b in plan.
 „ Pages 217, 218, *for* rock level 2411·6, *read* 2511·8.
 „ „ 2412· *read* 2512.
 „ „ 2414· *read* 2514.
 „ „ 2415· *read* 2515.
 „ Page 239, line 24, *for* Disopolis, *read* Diospolis.
 „ Page 240, line 14 from bottom, *for* Atakak, *read* Ataka.
 „ Page 240, line 4 from bottom, *for* then, *read* there.

October, 1887.—Page 241, top line, *for* san, *read* san.

“ Page 241, line 24 from top, *for* Gen. 33, 37, *read* 17.

“ Page 241, line 31 from top, *for* Mirian *read* Hiram.

“ Page 241, line 31 from top, *for* 45 *read* 46.

“ Page 241, line 6 from bottom, *for* 20 *read* 30.

“ Page 242, line 13 from bottom, *for* Jabel *read* Jebel.

“ Page 243, line 6 from top, *for* Pita, *read* Piha.

“ Page 243, line 21 from top, *for* Pe, *read* Pi.

“ Page 244, line 2 from bottom, *for* Clyoma, *read* Clysma.

“ Page 245, line 18 from top, *for* xv, *read* xiv.

“ Page 245, line 4 from bottom, *for* 12, *read* 11.

January, 1888.—In the list of subscriptions, *for* C. White, *read*
Edward White.

“ Page 22, line 7, *for* Waly Replhaim, *read* Wâdy Replhaim,

“ “ Bettis “ Bititr.

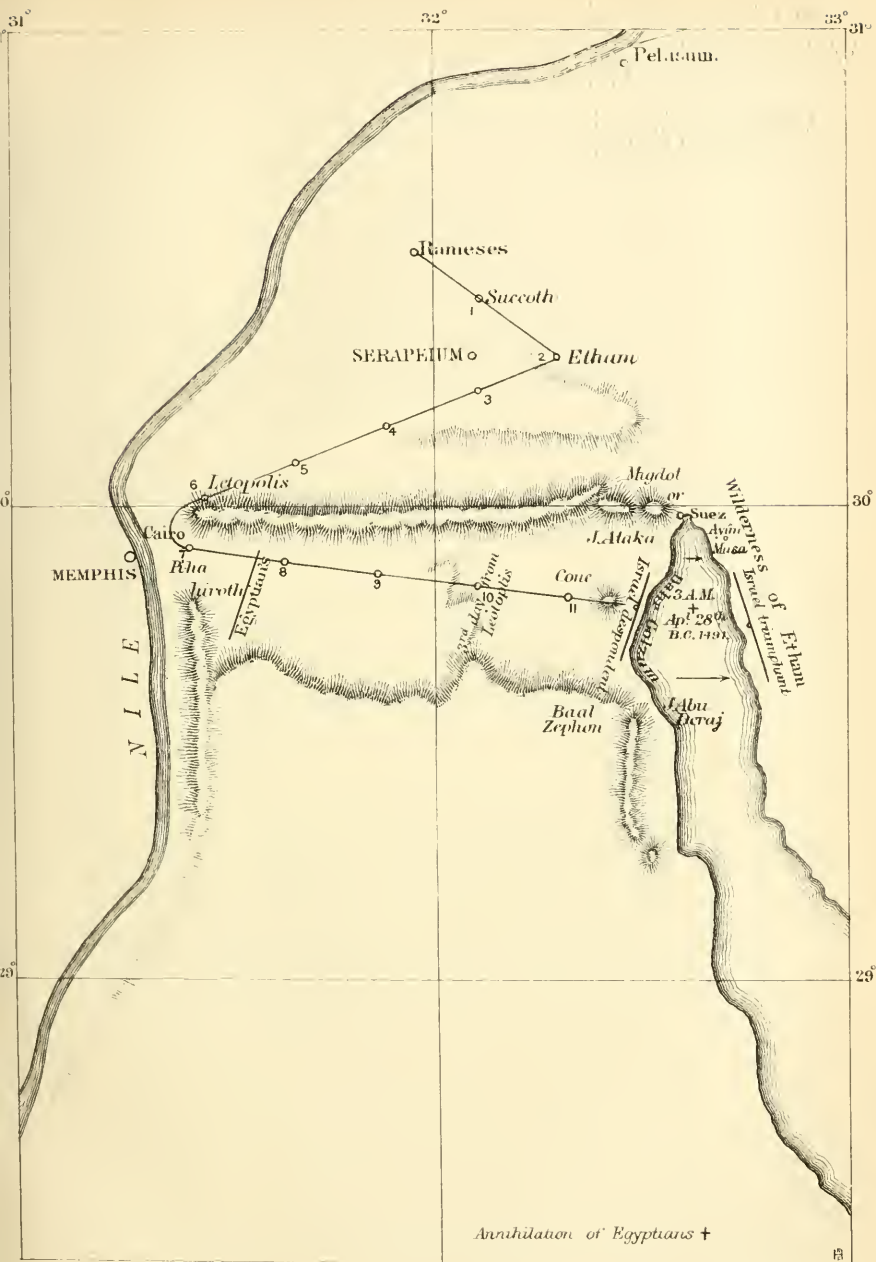
“ “ Iswain “ Ismâin.

“ “ Sarar “ Sûrâr.

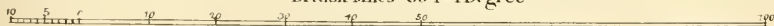
“ “ line 8, *for* Arlouf “ 'Artûf.



ROUTE OF THE EXODUS.



British Miles 69-1-1 Degree



Enlarged from Stanford's *Jan. Ancient*

Vincent Brooks Day & Son, Lith.

THE PALESTINE EXPLORATION FUND.

NOTES AND NEWS.

We have generally an announcement to make, but not often of so much importance as that of this day. It is the discovery of the Pool of Bethesda.

The modern identification of this Pool with the Birket Israil, north of the Haram, has never been accepted by any who have studied the question. The twin pool at the Convent of the Sisters of Sion has been of late years generally believed to have strong claims. The new discovery, however, removes the Pool to quite another place.

The Algerian Monks (French), *see* p. 115, digging on the north-west of St. Anne's Church, came upon a tank, about 100 feet distant. Crossing a courtyard and entering by a narrow passage, a building, measuring about 70 feet east and west, by 25 north and south, with an apse at the east end, was found. Its floor (about on the level 2,400) was some 7 feet below the general surface of the courtyard. Under this building are vaults about 10 feet deep, the floor level being that of the surface of the natural rock. Through the floor of these vaults a cistern is reached, cut in rock to a depth of 30 feet. It lies under the line of the building (apparently a church) with an apse, above-mentioned. Its measurement east and west from one rock wall to another is 55 feet; north and south it measures 12½ feet, but the north wall is of masonry, with four piers standing on rock bases supporting arches; the spaces between the piers have been filled in with masonry after building, probably at a later period. A flight of twenty-four steps leads down into this pool from the east scarp.

The church or chapel was probably built at a later period, when the surface level was within 6 or 7 feet of its present height, after an accumulation of 10 feet of earth over the rock, which, as we shall see, seems to have been still visible in 1172 A.D. This is also indicated by the position of the walls, over the pool. The vaults from the rock surface were no doubt constructed to bear the floor of the new church.

What is, however, of still greater importance, Herr Schick has found a second pool to the west of this, forming what is called a twin pool. The

interest of this discovery lies in the fact that the Pool of Bethesda had five porticoes. Now the only possible way for a pool to have five porticoes (unless it is a pentagon) is to be a double or twin pool, so that there may be one portico along each side and one for the wall of separation. Sir Charles Wilson, in his new edition of the "Bordeaux Pilgrim" (Palestine Pilgrims' Text Society), has drawn up a list of the principal authorities on this subject. From this it will be seen that there is a continuous chain of evidence from the 4th to the 12th century, both inclusive.

We publish simultaneously with this number of the *Quarterly Statement* an account, with maps, plans, and illustrations, of Fahil, the ancient Pella, by Herr Schumacher.

Little is known of the history of Pella, except the one fact which makes it remarkable, namely, that the early Christians retired thither when the troubles of Jerusalem began.

The Basilica, which Herr Schumacher describes, presents many curious details, and the system of caves with passages deserves a much more complete examination than Herr Schumacher was able to give. Copies of this little volume, uniform in size with "The Jaulân," can be had by subscribers on application to the Central Office only.

There is in the Press, to be published in October, Dr. Post's "Journey to and round Damascus." The account we shall produce will be the popular narrative, accompanied, however, by the chief Botanical results.

The List of Old Testament names and identifications was issued last year. That of New Testament names, which contains the references in Josephus to the New Testament places, is now ready. Subscribers can have copies of the latter, separate, at 1s., and of the two together, in paper cover, for 3s., and bound for 3s. 6d., by application to the office only. To the general public the price of the book will be 6s. 6d.

As already announced, with the view of clearing off the MSS. which await publication, the Committee have resolved on issuing an edition, in form similar to, and uniform with, the "Survey of Western Palestine," of the following works:—

1. Conder's "Survey of Eastern Palestine," so far as completed. The MS. is very voluminous, containing as much as will make a volume equal in size to those of the "Memoirs" in the "Survey of Western Palestine." None of it has been published; the drawings are very numerous, and of the deepest interest to the student of prehistoric monuments, as well as for the illustration of the Bible.
2. The Archæological Mission of M. Clermont-Ganneau, with the drawings of M. le Comte.

These drawings are many hundreds in number, and executed in the finest style. They figure a vast number of monuments and ruins not in the "Memoirs."

3. The Flora and Fauna of the Wady Arabah, by J. Chichester Hart, Esq., accompanied by many drawings of plants, &c., in the best style.

The editions will be limited to 500. The first 250 subscribers will pay seven guineas for the three volumes; subscribers to the "Survey of Western Palestine" will be privileged to have the volumes for this sum. The price will be raised, after 250 names are received, to twelve guineas. The Committee are *pledged never to let any copies be subscribed under the sum of seven guineas*. Mr. A. P. Watt, 2, Paternoster Square, is the agent.

The Palestine Pilgrims' Text Society has now issued the following works:—

1. "The Holy Places visited by Antoninus, Martyr."
2. "The Pilgrimage of the Holy Paula."
3. "Procopius" (Buildings of Justinian).
4. "Mukaddasi" (Description of Syria).
5. "The Bordeaux Pilgrim."
6. "The Abbot Daniel."
7. "The Crusader's Letter from Acre to England."

There are in preparation, and will be issued before the end of the year:—

1. "The Norman-French Description of the City and the Country."
Translated and annotated by Captain Conder, R.E.
2. "The Travels of Nasir-i-Khusrau." Translated by Guy Le Strange.
3. "Arculfus de Locis Sanctis." Translated by Rev. R. Macpherson, and annotated by Sir Charles Wilson.

Mr. A. P. Watt has now received a sufficient number of names to warrant the commencement of the publication of the Eastern Survey, the results of M. Clermont-Ganneau's Mission and Mr. Chichester Hart's Mission. Intending subscribers to these most important and valuable works are requested to send their names to Mr. Watt (2, Paternoster Square) without delay.

The friends of the Society are earnestly requested to use the "Memoirs of Twenty-one Years' Work" as a means of showing what the work has been, and what remains to be done.

Subscribers are very earnestly asked:—(1) To pay their subscriptions early in the year—say in January. (2) To pay them direct to Coutts and Co. by a banker's order. (3) If they would rather choose their own time, to send up their subscriptions without being reminded. The Clerical Staff of the Society is small; it is most desirable not to increase it; and if these simple requests are attended to a great saving of clerical labour, postage, and stationery is effected. For instance, there are, say, 3,000 subscribers. If every one of these waits to be reminded, and has to have a receipt sent to him, the Society has to spend £25 a year additional in postage, and to write 6,000 letters, merely to ask for and to acknowledge the receipt of the subscriptions.

The following books are now published uniform in size and appearance:—Conder's "Tent Work;" Conder's "Heth and Moab;" Schumacher's "Across the Jordan;" "The Memoirs of Twenty-One Years' Work;" Conder's "Syrian Stone Lore;" Conder's "Altaic Inscriptions;" and Schumacher's "Jaulan."

Subscribers can have the whole set, together with Hull's "Mount Seir," and Names and Places, for 32s., carriage free.

Mr. Armstrong has prepared a list of the photographs belonging to the Society, arranged alphabetically according to those Bible names which are illustrated by views. This list is now ready. Those who wish for a copy may send in their names.

The income of the Society, from March 21st to June 21st, 1888, inclusive, was—from subscriptions and donations, £264 18s. 1d.; from all sources, £447 5s. 5d. The expenditure during the same period was £662 7s. 11d. On June 21st the balance in the Banks was £224 3s. 10d.

Subscribers who do not receive the *Quarterly Statement* regularly are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

The only authorised lecturers for the Society are—

- (1) Mr. George St. Clair, F.G.S., Member of the Anthropological Institute and of the Society of Biblical Archæology.

His subjects are :—

- (1) *The General Exploration of Palestine.*
- (2) *Jerusalem Buried and Recovered.*
- (3) *Buried Cities, Egypt and Palestine.*
- (4) *Buried Cities of Mesopotamia*, with some account of the Hittites.
- (5) *The Moabite Stone and the Pedigree of the English Alphabet.*

Address : Geo. St. Clair, Bristol Road, Birmingham, or at the Office of the Fund.

- (2) The Rev. Henry Geary, Vicar of St. Thomas's, Portman Square. His lectures are on the following subjects :—

The Survey of Western Palestine, as illustrating Bible History.

Palestine East of the Jordan.

The Jerusalem Excavations.

A Restoration of Ancient Jerusalem. Illustrated by original photographs shown as "dissolving views."

- (3) The Rev. James King, Vicar of St. Mary's, Berwick. His subjects are as follows :—

The Survey of Western Palestine.

Jerusalem.

The Hittites.

The Moabite Stone and other monuments.

- (4) The Rev. Thomas Harrison, Surbiton.

POOL OF BETHESDA.

I.

RECENT DISCOVERIES IN JERUSALEM.

AFTER the Crimean War in 1854 the Sultan presented to the Emperor Napoleon the ruined Mosque called Salahieh, and other ruins adjoining which are situate near St. Stephen's Gate, and north of the Birket Israil.

This Mosque was originally the church of St. Anne, built in the Romanesque style, with a convent for Nuns. Salah-ed-Din on taking Jerusalem converted it into a Muhammedan school, and it was then subsequently known as "Salahieh," signifying the place or institution of Salah; in the course of time it lost much of its importance and gradually ceased to be a Muhammedan School, but Muhammedan cadets to the present day still attend for instruction by the Roman Catholic Arabic-speaking monks.

The French Government, on taking possession, restored the church, cleared the ground round about, and erected some new buildings and gave them over to the Algerian monks, who speak Arabic, wear white woollen habits—and a red tarbash or Arab cape. They belong to one of the many religious orders of the Roman Catholics, the name of which I do not know. They also established a school for native boys, and have carried it on for a series of years, having now about 30 boarders.

On clearing the place and removing an accumulation of rubbish, several important discoveries were made, one of which was a deep cistern (so-called at the time) with steps leading down into it, but was very seldom shown to strangers or others, the object being to acquire the adjoining property first; this has been accomplished and the cistern or pool is now open to visitors.

I deemed it advisable to make a plan of the whole place, noting on it all what appeared to me to be of interest in an archaeological point of view.

No. 1 is a plan of the whole place, with full details given as correctly as I possibly could obtain them. The line of the deepest points of the valley, according to Sir Charles Warren's rock contours, are also shown.

No. 2 is a section from west to east of the more northern part, showing the cistern or pool, the Church of St. Anne, and the city wall, and also the lie of the rock.

No. 3 is also a section from north to south of the western part, showing the cistern or pool and its connections, the elevation of the church, the court, the new building in course of erection, the recovery of the continuation of the conduit, the street called Tarik Sitti Maryam, and the Birket Israil.

The contour or lie of the rock differs in some small degree from that of Sir Charles Warren's.

I have inserted on the two sections drawings of fragments of masonry found on the spot, with scale, &c.

I will now describe the various parts under special headings, inserting reference letters and figures when necessary.

The Conduit or Passage.

Some weeks ago, having learned that the Arabic-speaking priests and monks at the Salahieh (St. Anne's Church and place) had begun to erect a new building, and in clearing for the foundation found a conduit, I went the next day to see it if possible. The foreman of the work showed me the line of the conduit and described its condition, but as it was walled or covered up, I was unable to see it then; however, an opportunity occurred in a few weeks, and I am now able to give the following description.

It runs nearly parallel with the northern wall of the Birket Israil, the later traditional pool of Bethesda, but nearly 80 feet north of it, continuing westwards under the building on the north side of the street Tarik Sitti Maryam to the street Suk Bab Hytta, where it is full of *débris*, and belonging to a different proprietor. I was unable to excavate any further west.

To the eastwards it was cleared out a long way; a man can easily walk in it. It is 2 feet 3 inches wide, with an average depth of 7 feet 6 inches. The sides are constructed of hewn stones, of good size, each layer one foot or more high, and in some places covered with thick flagging stones, in other places with a kind of an arch, consisting only of two stones placed in a slanting position one against the other. I could not positively decide in my own mind which of the two coverings is the oldest.

Eastwards it goes 150 feet to the building erected about fifteen years ago, where the passage was then observed for about thirty feet more, and was partially destroyed in digging the foundations.

The foundation of the new building as well as of the old is not laid on the rock, but on a layer of concrete.

The surface of the rock is very deep here.

The bottom of the conduit at the eastern part is seventeen feet below the surface or about 2,389 feet above the Mediterranean Sea.

In the "Recovery of Jerusalem" (page 178) Sir Charles Warren describes a similar passage which he found outside the city wall, and giving its level to be 2,390 feet; it is evidently quite clear that the one now found is a continuation of it. I have connected the continuation with dotted lines by a round bend, as I scarcely think it would be a sharp one (*see* Plan I). Sir Charles Warren believed that the portion of the drain or passage outside the city wall was for the overflow of the Birket Israil, and leading from its north-eastern corner, which is now evidently clear was not the case, but that it may probably have been a sewage drain coming from the fortress of Antonia and neighbourhood, and draining off into the Kedron Valley. During the progress of clearing away for the foundation of the new building, and over the conduit, several stone water spouts were found, which is strong evidence that other drains led into the main one.

As the sloping is always higher than the flat covering, I think the latter is the older of the two.

No. 4 are drawings of one of the waterspouts; A is a section, B shows the length and side view, and C is a view in perspective. It will be observed that the square part was intended to be built in the side or wall, leaving the projection into the drain about 9 inches.

Fragments of Carving.

When the ground surrounding the church of St. Anne was being cleared of the ruins, columns, capitals, bases, and mouldings were found, and are now piled up in a heap opposite to the entrance to the church. I give sketches of a few—Nos. 5, 6, 7. No. 5 seems to be the most curious; it is three steps cut out of a hard reddish stone, with the cross of St. John cut out on three of its sides. On the right and left sides they (the crosses) are of equal size, with a ring round them; the other side has the same arrangement, but the cross is larger and higher up. The steps are 1 foot 4 inches long and $9\frac{1}{2}$ inches broad; the two upper ones are 9 inches in height, the lower one 1 foot 4 inches, making the total height of the stone 2 feet 10 inches. On the sides of the steps is a $2\frac{1}{4}$ -inch rim, on which apparently stood a metal railing, the holes in which the rails were fastened being still visible. The question arises, What was this stone with the three steps used for? My opinion is that it stood in front of a font for the use of those persons who were about to be baptized. Or it may have been the steps to a pulpit or altar. The crosses indicate that it was used in the Middle Ages. The workmanship is good and well preserved.

No. 6 is a column in several parts, exhibiting good workmanship, put together and erected 28 feet from the north-west corner of the church of St. Anne. On the base (which is made of the same reddish stone as No. 5) is a panel with a cross in relief, exactly the same as in No. 5, and exhibiting the same kind of workmanship, but the mouldings above are of a different stone, and differently worked from that of the base; the pillar is apparently much older, is 21 feet 8 inches long, and 1 foot 8 inches in diameter. The capital is of marble, and is in a good state of preservation, but not rare.

No. 7 is a carved marble stone; the thick black lines are about half an inch wide, with a deep groove, having flute and cornice-shaped bands. Ornaments of a similar kind are often found with bands in relief, entwined at right angles, but this one with deep grooves and cornice-shaped is rare. The stone is about 8 inches thick, 2 feet 10 inches long, and 1 foot 2 inches broad, only a fragment of its former size.

The Church of St. Anne.

Vogue's Plans of the church of St. Anne in "Les Eglises de la Terre Sainte," Paris, 1860, like many others which I have seen, are far from being correct. The building is shown as being regular, whereas it is irregular, which can be seen at a glance of the plan which I made

(No. 1). The church, as it now stands, has many irregularities. In the east it is narrower than in the west; the side aisles are different in length, and slightly different in width. The buttresses in the northern wall project much more and stronger than those in the southern wall; the reason for this is difficult to account for. Each of the four buttresses in the western front differ in detail from one another, which is very strange, and this fact is not indicated on any of the plans I have seen.

The church is now surrounded by a paved court, bounded on the north and east by high walls, on the south by houses, and in the west by gardens and walls, and low buildings. (See Sections.) The rock-cut caves under the church are now connected, but formerly were not so. The eastern one resembles the bottle-shaped cistern; the western one, a vault, is the reputed lodging of Joachim and Anne, the parents of the Virgin Mary.

Ancient Tower.

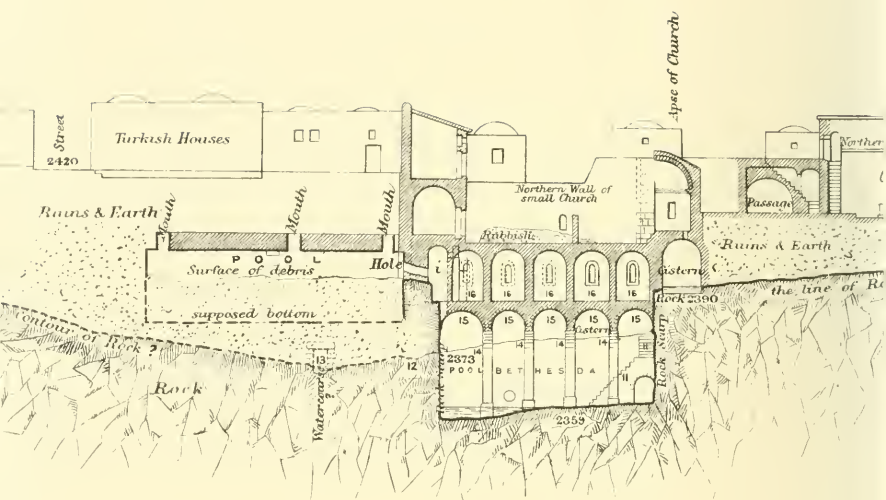
When clearing the place round the church, the architect, Mons. Maux, found this old tower, and cleared away the part projecting into the French property on the east side, and 21 feet 6 inches distant from the church. It was originally 76 feet long from north to south, and 62 feet broad from west to east, extending to the present city wall. Those measurements are approximate to those of the "Tower of David," and also the tower in the north-east corner of the Haram esh Sherif. The stone material used in this old tower I am unable to describe. From the configuration of the ground it would appear to have stood on the top of the ridge, and very probably on the eastern side of the tower a rock, scarp, or ditch may be found, but without excavating it is quite impossible to say. As to the object of this tower there is no evidence to produce; but I think it cannot date further back than the period of Agrippa, in the first century of the Christian era. There is some probability that the belfry of which Blackburn writes stood on this tower: "Era anesso anche el suo Campanile ma non resta di esso se non il primo ordine," 91 (Tobler, "Top. Jerusalem," Berlin, 1853, page 428), which I think to be the case. If so, the ditch or rock-scarp would be east of the tower, and the same as that of the present town wall.

The Pool of Bethesda.

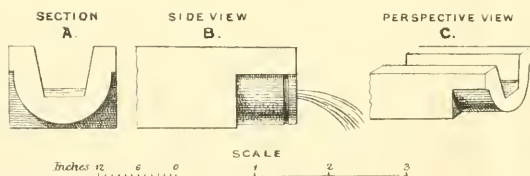
From the court west of the Church of St. Anne, and opposite the north-western angle, is the entrance to a passage, newly opened up, 24 feet in length, which leads into a court of about 50 feet square; the surface is very uneven, consisting of rubbish and ruins, sloping towards the north-west. On the east side of this court is a large arched room, open towards the west, marked 8 on Plan I; it is half full of earth; the masonry is Crusading. The north wall of this chamber is 6 feet 3 inches thick, in which is a wide door and short passage, with two steps leading down to a row of narrow (only 9

POOL

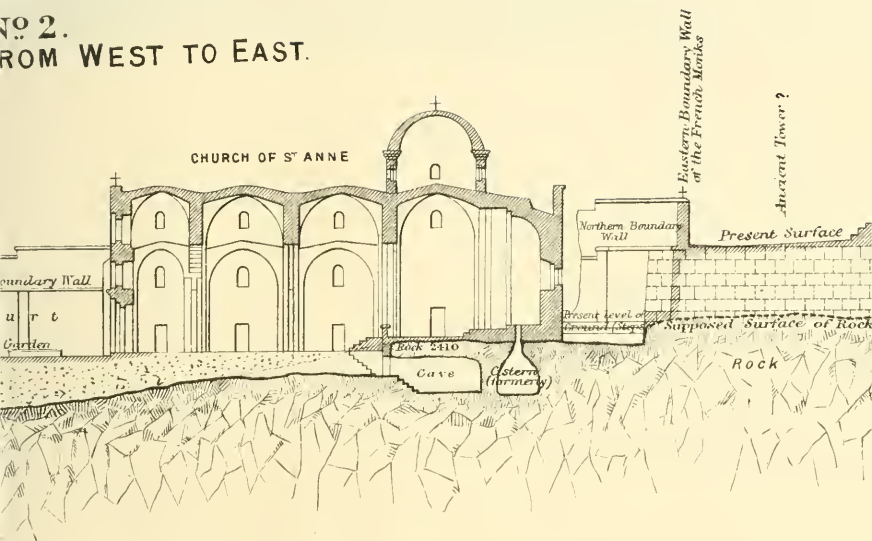
SECTION A.B



Nº4.

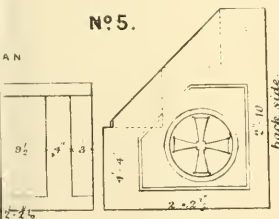


F BETHESDA.
No 2.
FROM WEST TO EAST.



SIDE VIEW.

No 5.

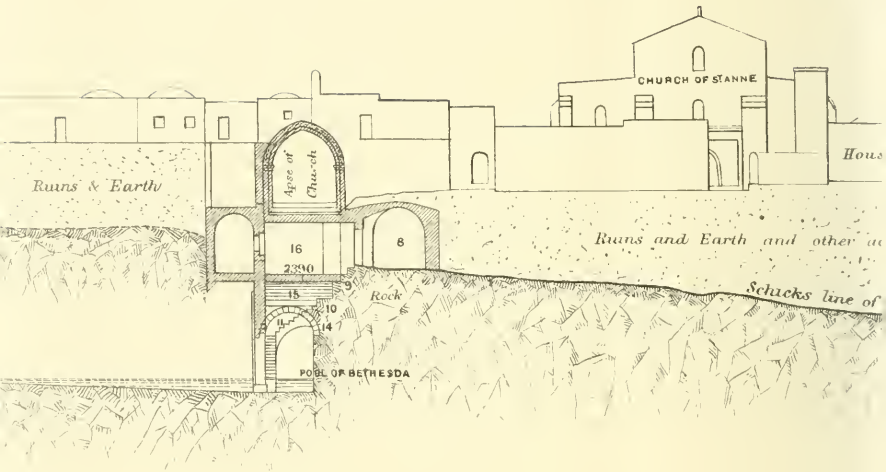


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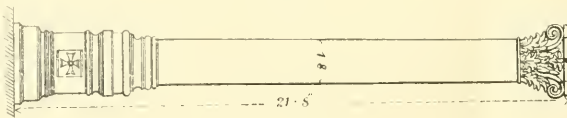
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Vincent Brooks, Day & Son lith

POOL OF BETHESDA
 No 3.
 SECTION C. D. FROM NORTH



No 6



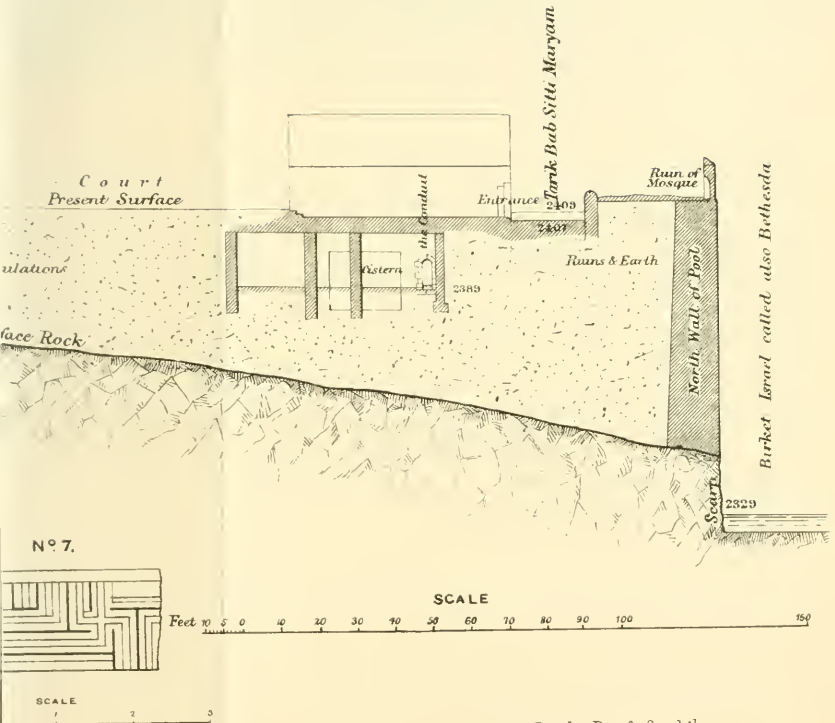
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Vincent Brooks Day & Son lith

feet wide) rooms ; traces of the eastern two are still visible, the three to the west being buried under rubbish. The monks, in digging along the western end of the court, came upon the wall between the fourth and fifth room, exactly of the same thickness as that between the first and second (the eastern two) ; this is evidence that there were five rooms of equal size, each 9 feet wide and about 14 feet long ; the exact length I could not decide, as there are no traces visible to show the southern ends of the walls. It seems that towards the south the halls or porches were open with a narrow passage in front of them, as indicated in Plan No. 1. The half-circled barrel arches of these vaults or porches were 13 feet in height in the centre ; each vault had an arched window in the northern wall, which seems to prove that they looked into an open street or passage, 11 feet in breadth, but which is now covered by a half-circled barrel arch in its whole length ; the wall in which the windows are is 2 feet 8 inches thick, but the thickness of the one opposite I could not obtain. Now on the top of these vaults a church once stood, the apse of which in the east is to a great extent preserved as indicated in Plan I, and Sections 2 and 3. The church was evidently not large, for, without the apse, only 20 feet wide (inside measurement), and, from an indication in the northern wall, seems to have been only 20 feet long. In the northern wall some stones are seen projecting ; I rather think these did not belong to the western end of the church, but that the church and ante-church extended over all the five vaults, for there is, a little to the west of the stones projecting in the same north wall, a very nicely shaped recess, such as are always found near the altar or font, so I imagine that over the middle porch stood the font, and this outer or ante-church was the baptisterium of that period. When the church was in use the font would be above the centre of the pool below, and the apse over the cistern, on the higher rock, which is 14 feet deep (*see* Section 2). A narrow door on the northern side of the apse leads to a small chamber, in which is the mouth of the cistern (*see* Plan I).

The flooring of the apse has disappeared, and is grown over with grass ; to the north and on higher ground are some Moslem houses, of only one storey high, in a bad state of repair.

Having explained all this, which is visible by day, it is time to light candles and go down below, descending by steps leading to the flooring of the porches ; over two high steps (9, Section 3) a wooden ladder is placed, and resting on a flat place marked 10 on Plan I, connecting the head of a flight of steps (marked 11 on Plan and Sections) which lead 19 feet down to a tank, containing, even to-day, some water. The bottom of it is partly uneven and sloping towards the west ; the steps end where the bottom is highest and dry when the water is low.

The west, south, and eastern sides of the tank are cut in the rock to the greater part of its depth, and are perpendicular. The northern side is a wall.

The general level of the bottom at the foot of the stairs is 2,359 feet above the Mediterranean Sea ; the top of rock on west side is about 2,373

feet (could not obtain exact level), the south side is 2,376 feet, rising a little more, and on the east side it rises up to 2,390 feet.

As Sir Charles Warren's contour (marked 12 on Section 2), giving 2,369 feet, passes only about 10 feet west of the tank, and comparing it with the heights of the rock on the other side of the valley, it is clear that the water course is actually about 20 or 25 feet more west, as I have shown in Section 2 (13). Probably, on the eastern slope, there had been originally a cliff or precipice.

The pool is now 55 feet long, but this was most probably the breadth, and 12 feet 6 inches of an average in width ; but, apparently, towards the north it extended much farther, as the present northern wall was subsequently built, for it does not appear to belong to the original work, excepting the round bases of the five piers, which are hewn out of the living rock. These bases are not all of equal height, but about $2\frac{1}{2}$ to 3 feet each above the bottom of the pool, having a diameter of 3 feet 2 inches. On these once stood round pillars, with the exception of one (the second from the west) which is square and walled in, and having a diameter of 3 feet. As regards the height of these pillars we may conclude that they would be about the same elevation as the surrounding rock ; the roofing was probably constructed of long flat stones stretching from pillar to rock, on which perhaps the five porches mentioned in John's Gospel, v, 2, were erected.

The five porches with the roofing and the pillars were destroyed, and on a restoration square piers were built of hewn stones in place of the pillars, and arched across over the tank (14). On top of the tank roof (14) barrel arches (15) were built. Such is my reasoning of the plan of erection with the five porches from the traces (16) that exist at the present day (compare Plan I, Sections 2 and 3). Later on, the openings between the piers were shut up with walls, as the masonry of these walls is not connected with the masonry of the piers.

I was told that there is always some water in the cistern, but the source from where it comes I could not ascertain.

The steps leading down into the pool are not the original ones, they are neither ancient nor modern ; they are built, and the original ones were certainly hewn out in the rock, as we generally find them in cisterns ; they vary in their height and width, and have apparently been several times repaired. There is an iron railing which is quite modern ; besides the two large ones, I counted twenty-four regular steps.

The bearing of the tank below differs slightly with that of the porches above. The bearing of the church of St. Anne is somewhat curious too.

From the examination of the details on the ground now described, I am under the impression that the cistern is the Pool of Bethesda ; at least it was the place which in the Middle Ages was considered to be the Bethesda.

I now append a short history of the Pool of Bethesda :—In the Old Testament the Pool of the Bethesda is not mentioned, but in the New Testament, St. John v, 2, we read, "There is at Jerusalem by the sheep

market, or gate, a pool, which is called in the Hebrew tongue Bethesda, having five porches" (in Neh. iii, 1, "Sheepgate"). The pool was near the Sheepgate; the Sheepgate was north of the Temple, which I believe to have been under the Harem Area, and a little south of Bab el 'Atm, or Hytta; and the pool, now examined for the first time, is north of the Harem Area, and in the neighbourhood where the Christians always thought it to be, though in later times, when it got buried up in ruins and *débris* and lost, the name Bethesda was applied to the Birket Israil. In the 4th century the "Bordeaux Pilgrim" writes: "There are two great pools at the side of the Temple, one on the right and the other on the left, made by Solomon." As it appears he came in by St. Stephen's Gate, and proceeded westwards, he would have Birket Israil on the left, and the one now discovered and examined on the right, near the church of St. Anne. Continuing along the street, he came to the "twin pools," which are outside the north-west corner of the Harem Area and under the new convent of the Sisters of Zion, and calls them Bethsaida = Bethesda, and mentions the five porches and the sick that were healed there; also notes the red colour of the water—and so does Eusebius—"that in one it was red, and the other it was rain water." But, as both pools, under the "Sisters of Zion," are so closely connected, the water in them both must have been always of the same colour—rain water, coming from a distance over the surface of the ground, is at the moment always red. If in the 4th century the "twin pools" were wrongly called Bethesda, the name later on was transferred to the one (the real Bethesda) now recovered, and which the Bordeaux pilgrim says was on the right hand. After the church of St. Anne and the convent were built the proper name was then renewed to the pool, which has since always been stated to be near to the church of St. Anne. Williams, in "The Holy City," p. 484, came to the same conclusion, that the lost pool (Bethesda) would be found near the church of St. Anne.

The pilgrims, in their accounts of Jerusalem, generally describe the pool with the five porches over it as being near the church of St. Anne. In later times, when the situation of the pool was lost, and spoken of as having two porches, the name was transferred to the Birket Israil, which is also near the church of St. Anne.

Gumpenberg, in the 15th century, notes that there were twenty-three steps leading down to the water, which can only be applicable to the one now recovered, which has twenty-four steps to the bottom; but very possibly in Gumpenberg's time the water was a foot higher. Tschudi gives thirty-three, but the two large steps over which is now placed a wooden ladder would make ten regular steps, which would account for the thirty-three. The Birket Israil would want at least seventy steps.

"The Holy City," by Williams, I do not possess a copy of, but I know he states that the natives speak of underground springs and large tanks in the neighbourhood of the church of St. Anne.

In closing this report I only wish to add that the Birket el Hedjeh, outside the city wall and east of Bab es Sahire (Herod's Gate), is only 700

feet north of the pool and in the same depression of ground, and may have been connected.

If the Bethesda extended farther north and under the present houses, the distance between the two would not be very great—about the same as that to the Birket Israil. I am convinced that we have in this pool, which has lately been discovered, the Bethesda of the mediæval times, and would hail with delight any notes from the Pilgrims and others appended to clear up and confirm the matter.

C. SCHICK.

JERUSALEM, 5th April, 1888.

II.

SOME weeks ago I forwarded a plan and sections of the quarter in Jerusalem called "*Salahieh*," showing the newly discovered pool with traces of five porches or chambers over it. Since then further excavations have revealed another cistern or pool.

In order to understand what I have now to say, I enclose three small plans which, when put together, show the three storeys, the second pool, and the one already reported on; also a section.

The plans are marked A, B, C, D.

A.—When I revisited the place again I found that I had made some mistake in laying down on the plan the direction of the tank from the bearing I had taken, which is now corrected as shown.

B.—Is a plan of the probable, or what I suggest, five porches or chambers, the remains of the two eastern ones being covered up, and also the western one, the arches being all broken down. The walls between the chambers were apparently not entire, but partly arched, and communicating one with the other.

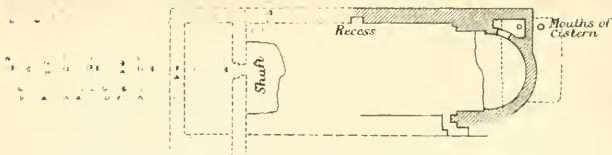
In digging through the western one, which is full of earth, and the arch fallen in, a rather low arch was found on its western side, belonging to a more recent period, evidently erected for the support of the present wall of the chamber over it. In the latter wall was found an opening, or doorway—a view of which I give on Plan E. This doorway was well made, and in front of it (west) was formerly an open passage (*i*). Another and wider passage came from the east, into which the windows of the porches or chambers opened, but both are now covered up. There may possibly have been a similar passage from the west, a continuation of *l*, *k*, but no indications of it were found. The masonry marked *a*, *b*, is apparently of the same period as the apse of the little church already mentioned.

The passage marked (*i*) is peculiar from its having a rock-scarp at its southern end, which surprised me very much to find, the rock rising to such a height. Consequently the rock is much higher than I at first observed (Section 2).

It seems that the shoulder wall on the west side is also rock, as shown in Plan B and Section 2. Behind the rock wall or scarp is a very thick wall built of small stones; a hole, see Plan B and Section 2, was made

PLAN OF THE CHURCH.

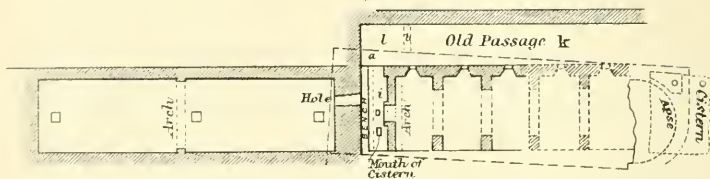
C.



Shaded portions Crusading

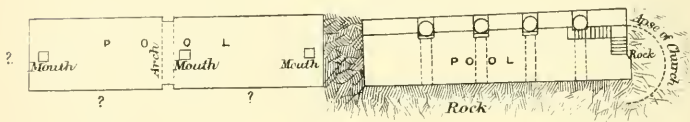
PLAN OF THE PROBABLE 5 CHAMBERS & WESTERN POOL.

B.



PLAN OF THE TWO POOLS

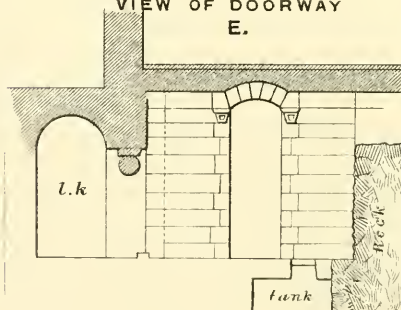
A.



SCALE 500

70 0 10 20 30 40 50 60 70 80 90 feet

VIEW OF DOORWAY E.



SCALE 1000

10 5 0 10 20 30 feet

in this wall, and a labourer from the village of Selwan crept in to see what was behind. He returned very quickly and died soon after, either from fright (he said that he had seen a large serpent) or from the impure air.

When I heard of this I immediately went to the place, and examined and measured the hollow or tank, but observed no serpent or anything strange, and found it to be an arched tank or cistern, tunnel-shaped, about 16 feet 6 inches wide. I could not measure it exactly at the springing of the arch, as there is so much earth. The length, from the thick wall westwards, I ascertained to be 64 feet, and about the middle of it is a special arch or girder built of hewn stones, on which the wall of small stones rests.

This second pool or cistern has three mouths—one in the centre, near the special arch, and the other two near the end walls.

I could not obtain the correct bearing or direction of the side walls, but they appeared to be running in the same line as those of the five chambers or porches, apparently of the same depth (probably deeper) and width.

On the flooring of the passage (*i*) south of the doorway is a small mouth to the pool below.

On the north end of the passage (*i*) is a badly built-up door, the lintel being a pillar, leading to a little room (*l*) of no special interest, but it was formerly part of the passage (*k*).

The size of the cistern east of the five porches or chambers, and under the apse, I have not ascertained, but think that it must extend as I have shown it on plan in a dotted line.

It has two mouths, one in the little side chamber of the apse of the church, and the other to the east of it, in the courtyard of a Moslem house.

C.—Is a plan of the little church over the vaults, &c., and the position of the shaft which the monks sank for their excavations, and which I have explained were found.

D.—Is a part of Section 2, already submitted, showing the corrections, the second tank or pool, and the passage (*i*) with the well-made doorway. The wall in which it stands is only 1 foot 9 inches thick, and has, 11 feet from the flooring, two nicely-carved corbel stones projecting about 1 foot; the wall above then becomes thicker. The passage (*i*) was formerly open, and on its flooring is a mouth to the tank or pool underneath, and it seems that the bottom here consists of rock or, it may be, very large flat stones, similar to the "pavement" described in the *Quarterly Statement*. The south wall seems to consist of rock, rising to a considerable height, as shown in Section 2, similar to the lower part of the tank wall, then forming a kind of bench 1 foot 8 inches broad, as shown in B. Behind is the 6-foot thick wall through which the hole was broken.¹

¹ All embodied in Section 2 and Plan B.

E.—A view of the well-made door with projecting corbels.

In conclusion, I wish to state that further examinations will bring more details to light, consequently some of my suggestions or explanations may be wrong. However, I record what I have seen, and submit it for consideration.

May 9th, 1888.

C. SCHICK.

III.

From the "Bordeaux Pilgrim" (Appendix III), published for the Palestine Pilgrims' Text Society.

THE questions connected with the Pool of Bethesda are of so much general interest that it has been considered desirable to treat them at some length.

The Name.—(1) In the Authorised Version (John v, 2) the pool is said to have been called in Hebrew Bethesda (Βηθεσδα), as if "house (place) of mercy," or perhaps, as suggested by Reland (856), the "place of the pouring forth" of water.¹ This reading is supported by the high authority of the best known Syriac text, the Peshito; it has also respectable support in MSS. and Versions, and internal evidence pleads strongly for it. The complete absence of any allusion in non-Christian writers to such a pool makes it very likely that its name is an invention of the Evangelist, and, if so, Bethesda was the one likely name for him to choose (Späth. "Protestn. Bibel ad Joann.," v, 2). The weight of MS. authority is, however, undoubtedly against the reading Bethesda; and the Revised Version gives, in the margin, the alternative readings Bethsaida and Bethzatha.

(2) The reading Bethsaida (Βηθσαϊδα), "a fishing place," is supported by the Vatican and Vulgate texts, and by the Syriac Version revised by Thomas of Harkel (616 A.D.); it is also the form used by the Pilgrim of Bordeaux. This name, however, which might naturally be given to a town on the shore of the Sea of Galilee, is scarcely applicable to an open reservoir crowded with bathers.

(3) The reading Bethzatha (Βηθζαθά), "place of olives," is supported by the high authority of the Sinaitic text, and it is the form used by Eusebius in the "Onomasticon" (s. v. Βηζαθά), where a θ has dropped out. The Belzetha (Βελζεθα) of the Cod. Bez. is also a corruption of the same word.

(4) The name Bezetha (Βεζεθα), by which Josephus distinguishes the hill north of the Temple, is merely a different form of Bethzatha (Βηθζαθά);² and it may be suggested as possible that the pool derived

¹ With this may be compared the Arabic *Beit el Ma*, "place of water"—a name applied to springs near Antioch, and at *Náblus*.

² In the LXX we occasionally meet with Beth (Βεθ) instead of Βαθ, or Βηθ, as in Βεθγεδών (Vat.), 1 Chron. ii, 51; Βεθσούρ (Alex.), Josh. xv, 58, etc. The θ also sometimes disappears, as in Βαιφαλάθ (Vat.), Josh. xv, 27, and Βαιμών (Vat.), Jer. xlviii, 23; and in Syriac and Chaldee the final "th" may be and is

its name from the hill, and was known as the "Pool of Bethzatha" (Bezetha). In connection with this suggestion it may be remarked that the "Pool of Siloam" is supposed to have been so named from the rock-hewn channel which conveyed to it the waters of the Fountain of the Virgin.

(5) In John v, 2 (R.V.), the Pool of Bethesda is said to have been "by the sheep-gate," where the word "gate" is supplied. Eusebius, however, in the "Onomasticon," calls Bethesda "the sheep-pool," and all other writers follow him. Chrysostom, quoting John v, 2, reads *προβατική κολυμβήθρα*, "sheep-pool;" and this agrees with the reading of the Sinaitic Version, as well as with that of the Vulgate, "probatia piscina." See also Athan., Cyril, &c., as quoted below.

Notices in Early Writers.—"Now there is in Jerusalem by the sheep-gate a pool, which is called in Hebrew Bethesda, having five porches (*στοαί*). In these lay a multitude of them that were sick, blind, halt, withered. [Waiting for the moving of the water, for an angel of the Lord went down at certain seasons into the pool, and troubled the water: whosoever then first after the troubling of the water stepped in was made whole, with whatsoever disease he was holden.] And a certain man was there . . . I have no man, when the water is troubled, to put me into the pool."—John v, 2-7 (R.V.).

Bethesda, "a pool (*κολυμβήθρα*) in Jerusalem, which is the sheep-pool, formerly having five porches. It is now identified with the twin pools (*ἐν ταῖς λίμναις διδύμοις*), of which one is supplied by the periodic rains, whilst the water of the other is of a ruddy colour—a trace, they say, of the carcasses of the sacrifices² which were formerly cleansed in it before offering, whence also it was called *προβατική*, 'sheep-pool.'"—Euseb., "Onom." (s. v. *Βηζαθά*); 330 A.D.

"There was at Jerusalem a sheep-pool, which is still in existence; it had five porches (*στοαί*), but the structures surrounding it are now destroyed."—Athanasius (?), "De Semente;" Migne, xxviii, 164; 320 A.D. (?).

"Further in the city are twin pools (*piscinæ gemellares*), with five porticoes, which are called Bethsaida. There persons who have been sick for many years are cured; the pools contain water which is red when it is disturbed."—"Itin. Hieros.;" 333 A.D.

"The sheep-pool (*προβατική κολυμβήθρα*) was in Jerusalem; it had five porches (*στοαί*), four surrounding it and one in the middle" (*τέσσαρας μὲν περιτρεχούσας, μέσην δὲ τὴν πέμπτην*).—Cyril of Jerus., "Hom. in Par.," § 2; Migne, xxxiii, 1133; 370 A.D.

"There is in Jerusalem a sheep-pool (*προβ. κολ.*) . . .," John v, 2, as quoted by Chrysostom, "In Joan.;" Migne, lix, 203. This reading agrees with the Sinaitic Version and the Vulgate.

dropped. No importance therefore attaches to the substitution of *ε* for *η*, or to the disappearance of the *θ*; and, so far as reasons of language go, *Βεζεθά*, *Βηζαθά*, *Βηθζαθά*, etc., may be different forms of the same word.

¹ In the margin only.

² Lit., of the "victims."

Jerome ("Onom.") agrees with Eusebius as quoted above ; 420 A.D.

"The pool which was once called sheep-pool."—Cyril Alex., "In Joan.," lib. 12 ; Migne, lxxiv, 636 ; 430 A.D.

"Bethesda is visible and remarkable by its double pool (*gemino lacu*) ; the one is commonly filled by the winter showers, the other is distinguished by its red waters."—Eucherius, "De Loc. Sanct. ;" 440 A.D.

"From the house of Pilate to the sheep-pool (*piscina probatica*) is more or less one hundred paces. There Christ cured the paralytic, whose bed is still there. Near the sheep-pool (or 'in the sheep-pool' according to some MSS.), where the sick wash and are healed, is a church of the Blessed Virgin."—Theod., "De Terr. Sanct.," viii ; 530 A.D.

"Returning to the city (from Aceldama), we came to a swimming-pool (*piscina natatoria*) which has five porticoes, and in one of them is the Basilica of St. Mary, in which many miracles are wrought. The pool itself is now choked with filth, and therein are washed all the necessary utensils of the city. We saw in a dark corner an iron chain with which the unhappy Judas hanged himself."—"Ant. Mart.," xxvii ; 570 A.D.

"I enter the holy Probatika (*προβατική ἀγία*), where the illustrious Anna brought forth Mary."—Sophr. ; "Anac.," xx ; Migne, lxxxvii, 3, p. 3821. In the same place the paralytic was cured, *l. c.*, p. 3823 ; 630 A.D.

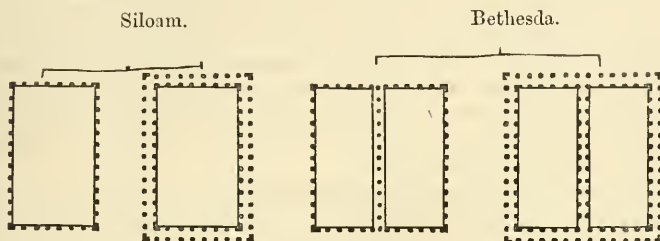
"Unto us is born, in the holy Probatika (*ἐν ἀγίᾳ προβατικῇ*), the mother of God," etc.—Joan. Dam., "In nat. B. V. Mar. ;" Migne, xcvi, 669. See also the curious apostrophe to the Probatika (*l. c.*, p. 677) and "De Fide Orth.," lib. iv ; Migne, xciv, 1,157 ; 730 A.D.

From the church of St. Sion, in the middle of Jerusalem, Willibald went "to the porch of Solomon, where is the pool where the infirm wait for the motion of the water, when the angel comes to move it ; and then he who first enters it is healed. Here Our Lord said to the paralytic, 'Rise, take up thy bed and walk.'"—Will., "Hod." xix ; 726 A.D.

A church of St. Mary, in the Probatika, where she was born ("Commem.," circ. 808 A.D.). The tract, "Qualiter sita est Civ. Jerusalem," supposed to have been written before the First Crusade, places the sheep-pool east of the *templum Domini* (Dome of the Rock), and outside the gate of the Atrium, which appears to have been conterminous with the Haram Area.

Nature of the Pool.—The Greek word *κλυμβήθρα*, "a swimming bath," translated "pool" in John v, 2, is used in John ix, 7–11, for the "pool" of Siloam, and in Josephus for the pools Struthion and Amygdalon ("B. J.," v, 11, § 4) and the pool of Solomon ("B. J.," v, 4, § 2) ; its equivalent in Latin is *Piscina*. These swimming baths, pools, or reservoirs were, as a rule, rectangular in form, and open to the air ; and they were often surrounded by columns or by porticoes (*στροαὶ*), in which the bathers undressed themselves and lounged before or after bathing. Siloam is said by the Bordeaux Pilgrim to have had four such porticoes, and remains of them have been found by excavation at the modern pool of that name. The Roman bath (*piscina*) at Bath seems to have had similar porticoes, and its appearance when perfect must have been not unlike that of the

Pool of Siloam. Bethesda had five porches, or porticoes, and much ingenuity has been expended on their arrangement. The explanation is very simple when it is remembered that Bethesda was a *double* pool; there was a portico on each of the four sides, and the fifth, as stated by Cyril of Jerusalem, was in the middle, between the two pools. It may be inferred from this arrangement that the twin pools were on the same level, close to each other, and not of any very great size. The porticoes of the pools of Siloam and Bethesda may have been on some such plan as those suggested below:



Position of Bethesda.—The Bible narrative indicates that Bethesda was in Jerusalem, and that it was an open reservoir having five porticoes. In the fourth century Eusebius, who gives no indication of position, speaks of the porticoes as having formerly existed; and the tract “De Semente” expressly states that they had been destroyed. Eusebius, moreover, says that the *κολυμβήθρα* was then identified with the twin *λίμναι*, as if some change had taken place in the character of the reservoir; and it may be remarked that Eucherius uses the word *lacus* instead of the usual *piscina*. The Bordeaux Pilgrim tells us that Bethesda was more within the city than two large pools at the side of (in the vicinity of) the Temple, which have generally been identified with the Birket Israil and the pool that formerly existed near the church of St. Anne. In the sixth century Theodosius says that the pool was about 100 paces from the house of Pilate, which he and Antoninus identify with a church of St. Sophia, apparently not far from, if it be not the same as, the “Dome of the Rock.”

The general tenor of these accounts seems to indicate that Bethesda was identical with the twin pools now known as the “Souterrains” of the Convent of the Sisters of Sion. We have here two pools cut in the rock, side by side, with a partition 5 feet wide between them, and covered by vaults. The total length is 165 feet, and the breadth 48 feet, and a never-failing supply of water enters at the north-west corner. The pools are peculiarly situated in what must have been the rock-hewn ditch between Bezetha and the fortress of Antonia, and this may have led to the name “Pool of Bezetha or Bethzatha,” as suggested above; their position with regard to the Temple would also have been convenient

for washing the "victims" offered on the altar.¹ The source from which the pools derived their supply of water is unknown, but an aqueduct has been found running into the western pool from the north; and there may also have been one of those "drifts" or rock-hewn tunnels for the collection of water, of which there is an example in the Wâdy Biyar, near Solomon's Pools. Water running into the pool from such a drift would naturally carry with it and deposit some of the red earth of which the soil north of Jerusalem is composed, and this, when disturbed, would produce the ruddy colour noticed by Eusebius and the Bordeaux Pilgrim. With regard to the movement of the water, which appears to have taken place at uncertain intervals, it is now generally accepted that the passage attributing the disturbance to the intervention of an angel is spurious; we know nothing of the times and circumstances under which the movement occurred, and can only suggest that it may have been caused by an intermittent flow of water from the aqueduct or "drift." During the rainy season, and for some time afterwards, there would be nothing unusual in such an intermittent flow.

Mons. Clermont-Ganneau² has identified these souterrains with the Pool Struthion of Josephus, at the side of which Titus erected one of his mounds against the fortress Antonia; and he explains the meaning of the name Struthion to be "the sparrow's pool," that is to say, the little pool, by a sort of popular *sobriquet*. It seems, however, more probable that in this case the word Struthion means "soapwort," and that the name "Soapwort Pool" was connected with the plant used for cleansing the wool of the sheep used in the sacrifices. There would thus seem to be a connection between the "Soapwort Pool," the "Sheep Pool," and Bethesda, and they were possibly different names for the same pool.

The history of the pool appears to have been somewhat as follows: When Titus erected his mound against Antonia the porticoes were destroyed; and on the rebuilding of Jerusalem, as Ælia Capitolina, the open pool (κολυμβήθρα) was transformed into a closed reservoir (λίμνη). The pool gradually became choked with filth, and at some period prior to the Crusades the site of Bethesda was transferred to the pool near the church of St. Anne. The general aspect of the pool before the destruction of the porticoes is indicated in the subjoined sketch, for which I am indebted to Captain Conder, R.E.⁴

The Pool of Bethesda, or *Piscina Probatica*, is now identified with the Birket Israil, but this identification does not appear in any writer

¹ The lambs for the daily sacrifice were kept in one of the chambers of Beth Mokadh at the north-west corner of the Temple court.—Lightfoot, "Prospect," xxix.

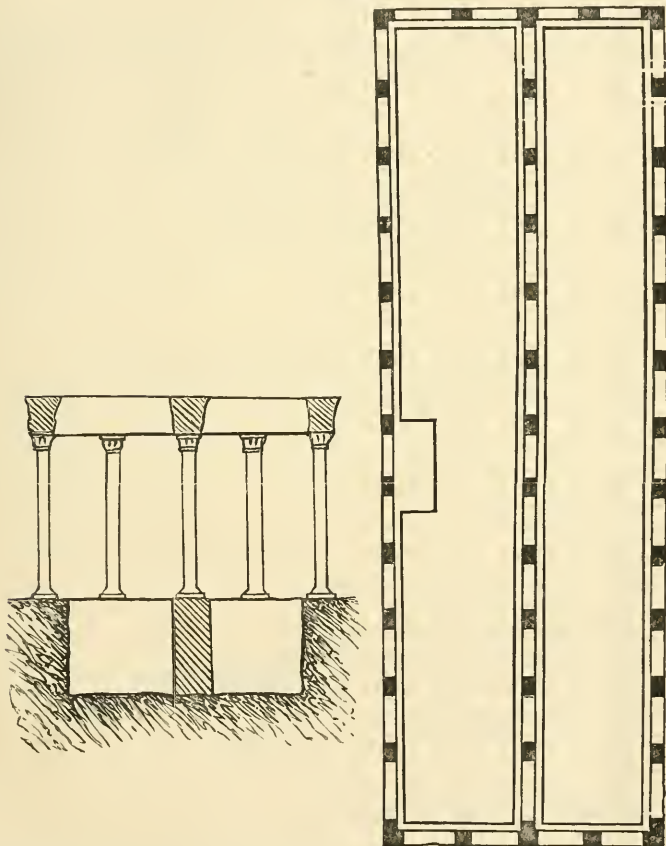
² See P.F. Q.S., 1872, pp. 47-51; and, for a description of the souterrains, "P. F. Mem.: Jerusalem," pp. 209-212.

³ P.F. Q.S., 1871, 106.

⁴ It is quite possible that the whole extent of the pool has not yet been discovered, and that it may have had a greater width than is shown on the plan.

before Brocardus (1283 A.D.). The earlier historians of the Crusades applied the name *Piscina Probatica* to a large reservoir adjacent to the church of St. Anne, which is now completely covered up and lost. This pool and the Birket Israil are generally supposed to be the two large pools alluded to by the Bordeaux Pilgrim as being near the Temple (*ad latus templi*) ; and William of Tyre (viii, 4) states that their water

SIR C. WILSON'S PROPOSED RESTORATION OF THE TRADITIONAL POOL OF BETHESDA.



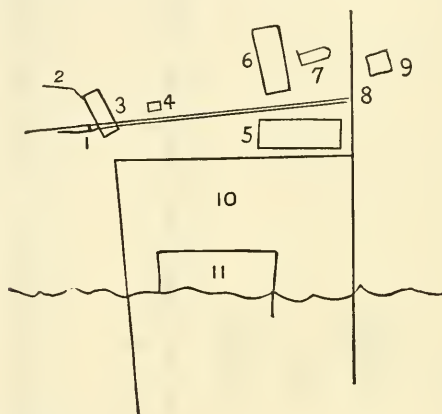
supply was brought by aqueducts from without the city. The Birket

¹ In the "Citez de Jerusalem" a spring is mentioned in front of St. Anne ; Brocardus and others allude to water in the upper pool ; and Sandys saw water, which must have come down the valley, trickling through the north wall of the

Israil is situated near the mouth of the valley which runs into the Kedron, south of St. Stephen's Gate; the other pool is higher up the same valley, and must therefore be at a higher level; it is clear, then, that no arrangement of five porches, such as that described above, could have existed, and that these pools cannot represent the Bethesda of Eusebius and the Bordeaux Pilgrim.

Dr. Robinson's suggestion that Bethesda may have been at the Virgin's Fountain in the Kedron Valley is hardly tenable, for there is no trace or tradition of anything that could be called a *κολυμβήθρα* in that locality.¹

SKETCH SHOWING POSITION OF POOLS NORTH OF THE HARAM AREA.



1. Ecce Homo Arch.
2. Aqueduct.
3. Souterrains at the Convent of the Sisters of Sion; Struthion of Josephus; Bethesda of fourth century.
4. Church of the Flagellation.
5. Birket Israil; the modern Bethesda.
6. Supposed position of the mediæval Bethesda.
- 5 and 6. The two large pools of the Bordeaux Pilgrim.
7. Church of St. Anne.
8. St. Stephen's Gate, or Gate of the Lady Mary.
9. Pool of the Lady Mary.
10. Haram Area.
11. Platform of the Dome of the Rock.

Birket Israil. The source from which this water came is an interesting subject for speculation; it was probably to the north of the city, and the same as that which supplied the souterrains at the Convent of the Sisters of Sion, and the reservoir at the Church of the Flagellation.

¹ It may be remarked that the Jews, at the present day, bathe in the Virgin's fountain when the water rises, as a cure for rheumatism.

Church of St. Mary.—Before leaving the Pool of Bethesda a few words seem necessary on the curious tradition which places the birthplace of the Virgin in close proximity to the pool, or, according to some writers, in one of its porticoes. The earliest notice of this tradition is in Theodosius, 530 A.D., and it is scarcely necessary to add that it rests on no foundation. The legend appears to have originated in that desire to localize all the events of the Virgin's life (*e.g.*, her death in the "Mother Church of all Churches" on Sion) which grew up in the fifth century after the Council of Ephesus; and we should probably not be far wrong in attributing it to Juvenal of Jerusalem. The modern Church of the Flagellation apparently occupies the site of the original Church of St. Mary; and when Bethesda was transferred to the pool near the Church of St. Anne the birthplace of the Virgin was found in the grotto beneath that church.

It is perhaps worthy of remark that the Arab name of the Church of St. Anne is *Beit hanna*, "House of Anne," an expression which is exactly identical with Bethesda, both signifying "House of Mercy." The Mary legend has also left traces in the Arab nomenclature of this portion of the city; as *Bab Sitti Maryam*, "Gate of the Lady Mary" (St. Stephen's Gate), and *Birket Sitti Maryam*, "Pool of the Lady Mary," outside the walls.

C. W. WILSON.

N.B.—The recent recovery of a portion of the mediæval Pool of Bethesda in the immediate vicinity of the Church of St. Anne, and the probable existence of a second pool beside it, is in favour of the view that the Pool of Bethesda, of Eusebius, was in this locality. Some other explanation must, however, be found in that case for the description of the Bordeaux Pilgrim, which I have supposed to refer to the twin pools beneath the Convent of the Sisters of Sion.—C.W.W.

IV.

A NEW discovery of great interest has just been reported by Herr K. Schick, namely, that of a large tank to the north-west of St. Anne's Church, about 100 feet distant. Crossing a courtyard and entering by a narrow passage, a building, measuring about 70 feet east and west, by 25 north and south, with an apse at the east end, is found. Its floor (about on the level 2,400) is some 7 feet below the general surface of the courtyard. Under this building are vaults about 10 feet deep, the floor level being that of the surface of the natural rock. Through the floor of these vaults a cistern is reached, cut in rock to a depth of 30 feet. It lies under the line of the building (apparently a church) with an apse, above-mentioned. Its measurement east and west from one rock wall to another is 55 feet; north and south it measures $12\frac{1}{2}$ feet, but the north wall is of masonry, with four piers standing on rock bases supporting arches; the spaces between the piers have been filled in with masonry

after building, probably at a later period; and Mr. Schick supposes the pool to have extended further in this direction, perhaps in five arcades or porches between the piers. A flight of twenty-four steps leads down into this pool from the east scarp.

The church or chapel was probably built at a later period, when the surface level was within 6 or 7 feet of its present height, after an accumulation of 10 feet of earth over the rock, which, as we shall see, seems to have been still visible in 1172 A.D. This is also indicated by the position of the walls over the pool. The vaults from the rock surface were no doubt constructed to bear the floor of the new church.

In a note on the Pool of Bethesda (*see* "Bordeaux Pilgrim," P. P. T. edition, p. 54) Sir Charles Wilson has indicated (No. 6 of the diagram) the position of the mediæval Pool of Bethesda just where the newly-discovered pool exists. He has also shown that the Bethesda of the fourth century A.D. was at the Twin Pools (No. 3 of his diagram), at the north-west angle of the Haram.

In an ancient map of Mediæval Jerusalem, published with Marino Samuto's account of the city (1322 A.D.), a pool is marked north-west of St. Anne, and shown running east and west, or across the valley which here exists. The pool is that mentioned by Ernoul, in 1220 A.D., as the site of Bethesda, though in the second part the author inclines to the later identification of Bethesda with the Birket Israil—the modern Bethesda.

The following notices of the pools are of value in connection with the new discovery:

The Bordeaux Pilgrim (333 A.D.) speaks of two large pools near the Temple—one on the right, the other on the left—in addition to the Twin Pools which he identifies with Bethesda. He ascribes these two pools to Solomon (*see* P. P. T. edition of this pilgrim, p. 20).

In the Onomasticon (Eusebius and Jerome, 330–420 A.D.) Bethesda is said to have "formerly" had five porches, "but now is shown as a Twin Pool."

Theodosius (530 A.D.) places the Probatia Piscina (*i.e.*, Bethesda) near a Church of St. Mary. In 570 A.D. Antoninus Martyr (xxviii) apparently alludes to the Twin Pools as Bethesda. St. Willibald, in 723 A.D., only alludes to the "Porch of Solomon, where is the pool where the infirm wait for the moving of the water."

In the Middle Ages, however, the pool near St. Anne—perhaps, like the Bir Eyûb, rediscovered and cleared by the Franks—becomes more important. Sæwulf in 1102 speaks of the Church of St. Anne, and "near it Bethsaida (*sic*), having five porches."

John of Würzburg writes, "in exitu ejusdem ecclesie ad dextram manum non longe per diverticulum est Probatia Piscina," clearly describing the newly-discovered pool. In 1172 Theodoricus speaks of the Church of St. Anne: "ad ejus aquilonalem partem qui progreditur, in valle profunda, juxta lapidosam quendam collem cui vetus quoddam opus

incumbit, Piscinam Probaticam inveniet." The mention of an adjacent "stony hill" with "remains of ancient work" and a "deep valley" shows that the accumulation of earth over the rock, which led to the site of the pool being lost, had probably not yet taken place.

We have also the two notes in the "Cîtez de Jherusalem," where first we find notice of the church over the fountain—written about half a century after Theodoricus.

William of Tyre, ch. 1 (*see* Bongar's "Gesta Dei," p. 473), says of this pool: "Veteris piscina adhuc vestigia retinens quinque porticus habens . . . ad quam nunc per porticam unam descenditur et reperitur aqua ibi gustu amara." Hence in his time (about 1180) the pool had already its present form, and was supposed to be only in part accessible—one out of five porches being open. The bitter water here noticed agrees with Mr. Schick's view, that the channel found near the pool and leading to the Birket Isrâîl was a drain. William of Tyre places Bethesda at the newly-found pool, and mentions the Birket Isrâîl as *Lacus quidam*.

In 1283 Brocadus, however, places the Probatica Piscina south of the road to the east gate of the city (*i.e.*, at the Birket Isrâîl); and north of that road he mentions "a very large pool," which he says Hezekiah made, and which he calls Piscina Interior, or the "inner pool." This becomes the recognised name of the St. Anne Pool, after the change of situation of Bethesda to its modern traditional site.

John Poloner (1422) speaks of the "Piscina Interior quæ est ad S. Annam," and Marino Sanuto (1322) notices the pool by the same name as being near St. Anne. In the "Travels of Sir J. Maundeville" (*see* Bohn's series, "Early Travels in Palestine," p. 172) we read that in the Church of St. Anne "is a well in manner of a cistern, which is called Probatica Piscina, and which hath five entrances." Even as late as 1509 Anselm says that not far from St. Anne, towards the House of Pilate (*Ecce Homo Arch*), is a very large pool.

From these notices we gather the history of the pool. It apparently existed in 333 A.D., and, being rock-cut, may be one of the ancient pools of Jerusalem. Josephus, however, only mentions one pool (Struthion) in this quarter of the city (5 Wars, xi, 4), which appears to have been that known as the Twin Pool "at Antonia."

We gather also from the passages cited that the church over the pool existed in the Crusading period, but probably not earlier, and that the present north wall of the pool existed already about 1180 A.D. In the twelfth century the pool was regarded as the Bethesda (or Bethzatha or Bethsaida) of the Gospel (John v, 2), and called the Probatica Piscina or "Sheep Pool;" but about 1230 A.D. (the time of the second Frankish occupation) the Birket Isrâîl begins to be regarded as Bethesda, although the Piscina Interior was known and occasionally called the "Sheep Pool" down to 1500 A.D.

It may here be noted as of some interest that Marino Sanuto gives an account of Hezekiah's alterations in the water supply of Jerusalem. He

regards the Piscina Interior as the "Upper Gihon," and apparently thought that originally an aqueduct ran from Birket Mamilla (west of the city) across to the Piscina Interior, but that Hezekiah diverted the water "west of the Tower of David" to the Lacus Germani (Birket es Sultân). The Birket Mamilla is connected by aqueduct with the citadel (near the Jaffa Gate), and its level is about 110 feet above that of the Piscina Interior.

Whether any of these pools can claim to be the true Bethesda is doubtful. The word in Hebrew, according to Reland, means (בֵּית אֶשְׂרָא) "house of pouring forth" (see Sir C. Wilson's note in "Bordeaux Pilgrim," P. P. T. edition, p. 45; and compare Ashdod Pishgah, "the streams of P.") The only place near Jerusalem where a periodical "troubling of the waters" is now known to occur is the Virgin's Fountain, which Robinson regarded as Bethesda, and where the Jews still wash to cure disease. If this be the true site, the *Probatike*, or "Sheep place," would be a name referring to the collection of flocks for watering at this spring.

C. R. CONDER.

RECENT DISCOVERIES AT CÆSAREA, UMM EL JEMAL, AND HAIFA.

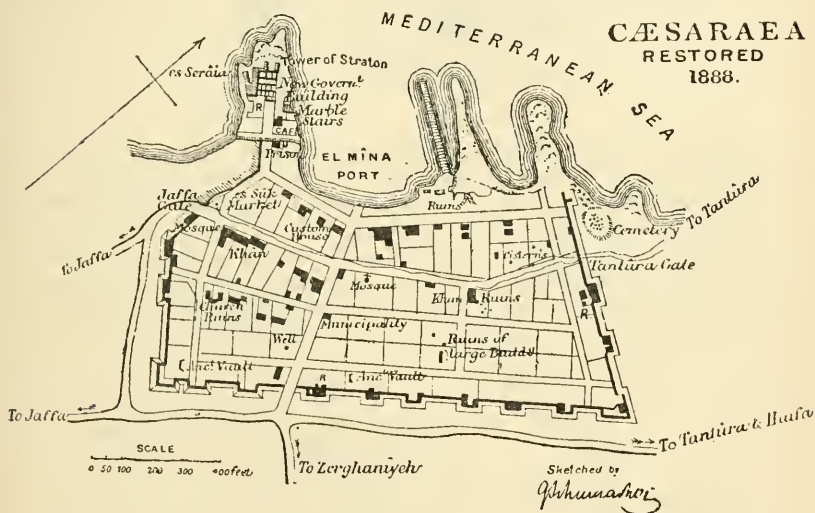
I.

Cæsarea.—The ancient site of Cæsarea, as already mentioned in former *Statements*, has been restored by immigrants from Bosnia, who, after the Austrian occupation, fled to the Ottoman Empire and found a refuge at Cæsarea, where extensive parcels of land were granted to them by the Sultan. This place now contains forty-five families of Bosniaks, who erected solid dwellings with tile roofs, which renders the place quite an European aspect, entirely different to the poor huts of their fellahîn neighbours, but their roads remain in a primitive state; no general plan was observed, and frequently disputes arose amongst themselves as to the lots they occupied within the city wall, still existing from the Middle Ages. In consequence thereof, the Government ordered its engineer to lay out the place in equal lots, not exceeding one-third of an acre each, and to construct roads, reserve a market place, a lot for a custom-house and a municipality. The annexed sketch will illustrate the plan of restored Cæsarea, dividing the plain into seventy-five lots, forty-five of which, as before said, are already occupied, the remainder being in reserve for future Bosnian immigrants.

On the western part of the ancient site a narrow peninsula projects into the Mediterranean, on which the ancient tower of *Straton* was erected. According to Sepp (*"Jerusalem und das heilige Land,"* vol. ii,

p. 573), and Reland, p. 670, a certain Straton of Greece first founded the city, who evidently was a Syrian general, and the fact that the "day on which the kings from the dynasty of the Chasmonians (Chasmonäer) commenced to govern was called the day of conquest of the tower of Straton" illustrates its importance.

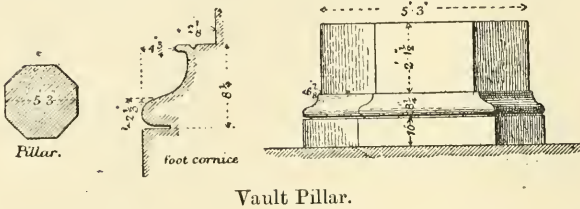
Dr. Sepp further states that in the interior of the tower a "tabula Domini," a table where Christ ate with His disciples (Odorich, 1330, c. 55), was shown. Strabo (xvi, 2) knows the place by the name of the "tower of Straton with a port," and Josephus (Wars, chap. xxi, 5) mentions its fall into decay, and its re-erection by Herod the Great, as well as the foundation of the beautiful city of Cæsariæa. This tower of Straton is no more; the high tower ruin, characterising Cæsariæa in modern times from a considerable distance as such, has been pulled down, and a modest Government building, the seat of a Moudîr, replaces it partially. Many



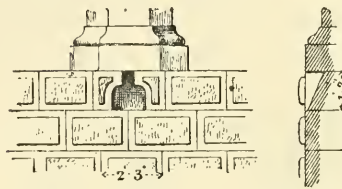
okes of powder were used to destroy this remarkable monument, with its walls up to 12 feet thick, but its vaults remained in the first storey and may wait a generation more until they are opened; as much as I could make out, these vaults were plastered and must have been used as water reservoirs; the tower, rising to about 60 feet above the sea, was in want of sweet water.

Amongst the *débris* of the floor of the first storey the octagonal pedestals of former pillars were brought to daylight; the pillars had a diameter of 5 feet 3 inches, were yet in all 3 feet 7 inches high, and showed the simple cornice as sketched. They were built of sandstone similar to all the other buildings.

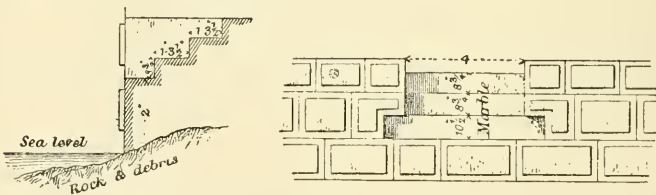
The large building stones of the lower part of the tower are bossed,



and below the pillar above given, on the eastern front, arranged as sketched.



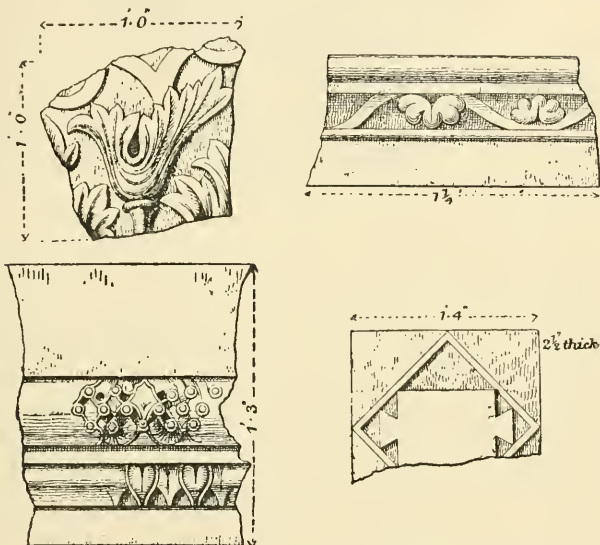
The floor of the tower is similar to the Arab cementing, "Bar-barika," frequently used in this country for floors and roofs; a layer of good mortar, $1\frac{1}{2}$ -inch thick, in which small fragments of flint and other hard stones, pieces of brick and tile, are laid, and the whole mass stamped until it hardens. On the north of the tower a stair was opened which evidently led to the small northern harbour; its steps are made of good white marble, 4 feet wide, and each $9\frac{3}{4}$ inches to $10\frac{1}{2}$ inches high, surrounded by bossed blocks.



The ancient Christian Basilica, in the south-east corner of the Middle-Age city wall, is entirely laid in ruins, and the apses are overbuilt by a Bosniak dwelling-house, while a new mosque is erected a little to the west of it; all I could save were a couple of fine Corinthian marble capitals and fragments of the vaults. The Bosniak houses partly occupy the counter-forts of the city wall. Near the southern gate a small vault, 5 feet wide, carefully built, was opened, but immediately filled up with straw, and another, with thirty steps leading into the corridor surrounding the wall on the outside, near the church mentioned; every discovery is carefully hidden by the Bosniaks, who, hostile as they are, fear nothing more than

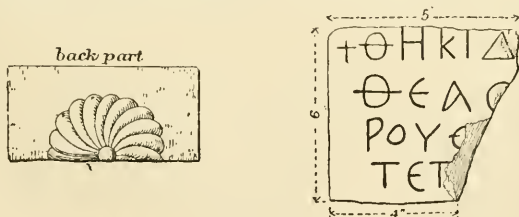
the penetration of foreign elements ; therefore no stranger is welcomed there, and, although they recently were obliged to erect a "Menzûl" or fellahin inn for travellers or guests, no visitor will remain longer than absolutely necessary, he finding the streets desolate, and no sympathetic friendly face to answer to his wants.

After passing through the gate leading to Zerghaniyeh, I arrived at the depression marking the Roman hippodrome. I here and there found recent excavations, and the field covered with fragments of marble and building stones—of the latter, thousands and thousands being constantly exported to Jaffa. Of the fine marble ornaments brought to daylight, I here add a few sketches.



Marble Ornaments from Caesarea.

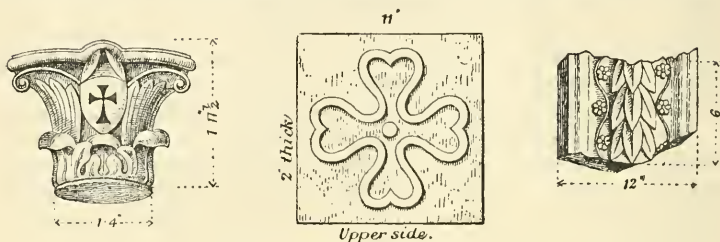
Besides a number of Christian emblems, crosses, laurels, &c., I also found a fine small marble capital 1 foot 11½ inches high, 1 foot 4 inches



Marble Ornament and Greek Inscription from Caesarea.

in diameter, which shows a carefully-hewn cross on a sort of scutcheon,

and on a planted field next to the Hippodrome a Greek inscription on a



Marble Ornaments from Caesarea.

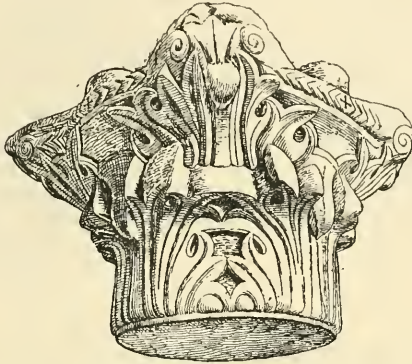
marble piece. The Bosnian immigration is still continuing, although on a very small scale.

Umm el Jemâl.—The Jewish colony on this ancient site in the neighbourhood of Zimmârîn will soon be inaugurated; seven buildings are ready for habitation. Of ancient remains very little was found. Large hewn building stones, 4 feet below the surface of the earth, and foundation walls, parts of sandstone columns $2\frac{1}{2}$ feet in diameter, four large cisterns, a small press, and some graves were found; the press is but 3 feet long, and consists of the Nâri-stone. The graves were about 3 feet below the surface, were 5 to $6\frac{1}{2}$ feet long, surrounded by rough stones and covered by limestone plates, and contained some human bones. There was no sign of any carving on the slabs. Just above these graves, on the surface of the earth, there are also signs of an old cemetery of Bedawîn origin, as stated by the fellahîn of the district, and also signs of the wely of a Muhammedan saint under an old oak tree.

Haifa.—In the interior of the present city, near where the southern part of the city wall formerly stood, an old house, said to have been built before the regular settlement of the place commenced, was pulled down, and in the foundations of the new one the masons struck an upright standing granite column with a marble capital and some foundation walls. I tried to convince the proprietor to follow up the subterranean walls, but in this did not succeed. Nevertheless, I brought the capital to daylight, and annex its photograph, from which will be seen that it is of Christian origin, it bearing a cross in the upper part of each of the four sides. The diameter of the column was 1 foot 1 inch; the height of the capital 1 foot $3\frac{1}{2}$ inches. The sculpture is not very fine, but distinct, and resembles the works of Crusade churches.

This column head is actually the first antiquity found within the limits of the present city of Haifa, and I feel convinced that it belonged to a crusading monument. Röhricht ("Zeitschrift Deutsch. Palest. Verein," Bd. x, 4, pp. 203, 207, 216, 227, 310 ff.), in his highly valuable account on "Studien zur mittelalterlichen Geogr. u. Topographie Syriens," states that, among the properties held by the Crusaders in the 12th and 13th centuries, a house in Cayfas, on this side of the river,

next to the gate which leads to Accon, belonged to the Abbey of Galilee, and on p. 310 he states the existence of a church, "*ecclesia S. Mariæ*." On pp. 207 and 208 he says that the Church of the Holy Sepulchre had property between Chayfa and Palmarea ("in villa deserta



Marble Capital found at Haifa, from a Photograph.

inter Cayfam et Palmaream sita," etc.). Palmarea must have been built on the actual place where the present city of Haifa stands, while the old site of Cayfa was at Hêfa el 'Atika, on the Râs el Krûm; and the name, the Palm City, owes its origin to the existence of a fine palm grove east of Haifa, near the Kishon river, where still hundreds of palm trees are cultivated, and where here and there cisterns and ruins are found. Also close to the so-called Gate of 'Acca (Buâbet 'Acca) a rock-cut Birket with water channels, and a destroyed tomb, carefully pierced into the solid sandstone rock, were laid open at the construction of a road from said city gate towards 'Acca.

Besides these facts, which already seem sufficient to prove that modern Haifa is analogous to Palmarea, it must be stated that, according to reports from old inhabitants, Haifa (or Hêfa) was built on ground with scattered ruins by Daher el Omar, who destroyed ancient Haifa because that position was too much exposed to the invasions of Bedawîn and the renowned highwaymen of the neighbouring village of et-Tireh, and built a wall and castle more towards 'Acca, from where he could attend easier to the inhabitants, respectively send them protection, and obliged the old Haifiotes to settle the new place within the wall he built, which settlement was first called el 'Amâra, until the old signification, Hêfa, again became familiar. By old fellahîn Sheikhs now and then 'Amâra is yet named for Hêfa, and this name sounds similar to Palmarea. Briefly, there is no site of an ancient place between Hêfa el 'Atika and the Kishon on this side of the river except the building ground of modern Hêfa, which must therefore represent Palmarea.

NOTE.

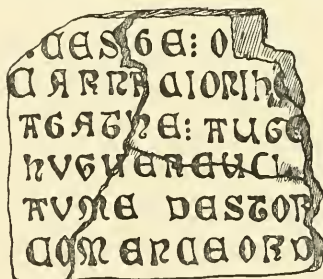
On the last page of the "Zeitschrift D. P. V.," Vol. x, Heft 4, at the end of Röhrich's interesting account I above mentioned, I find a remark by Herr Dr. Wetzstein that Mejd el Kerûm, mentioned in the Name lists of the Palestine Exploration Fund Map, Sh. III, is wrong, and should be called Merj (Merdsch) el Kerûm. As this place is often visited by me, I convinced myself of its true spelling and pronunciation, and can state that the name Mejd el Kerûm, *معبد الكروم*, the glory of vineyards (plantations, gardens), as called in the Name lists, is the right one, and could, besides this, find no objection to it being a good Arabic word. Both mejd and merdsch are often used in local names, and Mejd el Kerûm has every right to bear this distinguishing name, for its very extensive olive groves produce the finest olive oil found in the surrounding country.

G. SCHUMACHER.

HAIFA, May 7th, 1888.

II.

'Acca.—Among the *débris* of a house within the present fortification wall at 'Acca the following inscription was found engraved on a broken marble slab :—



The characters of the above are the so-called (modern) Gothic letters used between the 13th and 16th century, especially by monks. They closely resemble the characters of the inscription on Philip D'Aubigné's tomb at Jerusalem (*Quarterly Statement*, April, 1887, p. 76), and may have been placed on the tomb of a certain "AGATHE," which name is contained in the inscription.

Saida (Sidon).—The Imperial Director of the Museum at Constantinople, H. E. Hamdy Bey, has resumed excavations at Saida, at a place near where the famous sarcophagi were found. He daily employs from fifty to sixty native workmen, but has had no other result yet than to find a necropolis containing some sarcophagi, which had been ransacked before, and were entirely empty.

Beisân.—Natives brought to me last week an interesting mask of a human head, made of pottery, which they found among the ruins of Beisân. I here add a photograph of same. The ears and eyes contain

small holes. The Persian beard is regularly curled—the hair twisted round the forehead in the shape of a garland of pearls; the upper part of the head, the crown, contains ornaments of vine leaves, very primitively made :—

Side view.



Near 'Abillîn more tombs, cut into the soft limestone rock of the vicinity, were lately found. Most of them contained sarcophagi made of pottery. (See description of such, by L. Oliphant, Esq., *Quarterly Statement*, April, 1886, p. 80.) From one of these tombs I purchased a small earthenware lachrymatory (at least, natives pretended that they found it there). The antiquity contains on both broad sides the same figure, holding in its spread arms an animal; and to the right and left of the human head a cross is placed. The whole picture seems, as both sides are exactly alike, to have been stamped into the soft clay. The enclosed drawing shows its natural size and shape.

G. SCHUMACHER.

HAIFA, May 16th, 1888.

ON THE TRANSCERENCE OF THE ARAB NAMES OF SOME OF THE GATES OF THE HARAM ASHERIF BETWEEN THE ELEVENTH AND FIFTEENTH CENTURIES.

IN the note on the Gates of the Haram which I contributed to Mr. Guy le Strange's translation of *Mukaddasi* I was misled by the statements of Mujîr ad-Dîn, and by modern tradition, which follows that author. A comparison of the descriptions of *Mukaddasi* (985 A.D.) and *Nâsir-i-Khusrau* (1047 A.D.) with each other, and with the description of *Mujîr ad-Dîn* (1496 A.D.) and existing remains, enables me to correct in great measure the errors in my former note; to identify many of the gates with some degree of certainty; and to show that a change took place in the Arab nomenclature of the gates between the 11th and 15th centuries, possibly when Jerusalem was captured by Salah-ed-Din.

Nâsir describes (p. 41) the Bâb an Nabî (Gate of the Prophet) beneath the Mosque al-Aksa in such terms as to leave no doubt of its identification with the Double Gateway and the passage leading upwards from it, beneath the Mosque, to the Haram area. He also mentions (p. 43) another gate, Bâb al Hittah (Gate of Remission), as being excavated in the ground; and the only known gate of this character in the Haram is the closed Gate of Muhammad, or of the Prophet, beneath the Bâb al Maghâribe. If now we turn to Mukaddasi's list of the gates, we find that he commences with Bâb al Hittah; that his second gate is the "two gates of the Prophet;" and that he ends with the Bâb Dâûd, which is without dispute the Bâb as Silsilah of the present day. The inference I draw from this is that Mukaddasi named the gates in order, commencing with the Bâb al Hittah and ending with the Bâb Dâûd, and not, as I supposed in my former note, at hap-hazard.

In attempting to identify the gates with those which now exist, it is necessary to bear in mind that the Haram area, with its buildings and the approaches to it, have been much altered at various periods, as, for instance, during the Latin Kingdom, after the recapture of the city by the Saracens, and when the walls were rebuilt by Sulaiman in the 16th century.

Following Mukaddasi's list, we have :—

1. Bâb al Hittah (Gate of Remission). The Bâb al Hittah of Nâsir, which was excavated in the ground. This is the present closed gate, Bâb al Borak, or Bâb an Nabî Muhammad, beneath the modern Bâb al Maghâribe. It is called Bâb an Nabî by Mujîr ad-Dîn, who places the Bâb al Hittah in the north wall of the Haram.

2. The "two gates of the Prophet" (Mukaddasi). The "Gate of the Prophet" in the south wall, and beneath the Mosque al-Aksa of Nâsir. The present Double Gate, the Arab name of which is "the Gate of the Old Aksa," as given by Mujîr ad-Dîn.

3. The "gates of the Mihrâb Maryam" (Muk.). These gates must have been close to the Mihrâb Maryam (p. 35), in the south-east corner of the Haram, from which they take their name. They apparently correspond to the Bâb al 'Ain of Nâsir (p. 43), and are now represented either by the closed "Single Gate" in the south wall or by the "Triple Gate."

4. The "two gates Ar Rahmah" (Muk.). The Bâb ar Rahmah and Bâb at Taubah of Nâsir, so called by Mujîr ad-Dîn and by Moslems at the present day. The double gateway known as the Golden Gate.

5. The "gate of the Birkat Bani Isrâil" (Muk.). The eastern gate in the north wall is called by Nâsir the Bâb al Abwâb (Gate of Gates). It is now called, as in Mujîr ad-Dîn, the Bâb al Asbât (Gate of the Tribes), and opens to the road over the dam at the east end of the Birkat Isrâil.

¹ The Bâb al 'Ain probably derived its name from the Virgin's Fountain, to which the road passing through it led; the Mihrâb Maryam is a reminiscence of the Mary Church of Justinian, built in this part of the Haram; and the Virgin's Fountain possibly owes its modern name to the same source.

6. The "Gate of Al Asbât" (of the Tribes) (Muk.). It corresponds to the Bâb al Asbât of Nâsir (p. 32), which was in the north wall to the west of the "Gate of Gates." It is now called Bâb al Hittah, and was known by the same name to Mujîr ad-Dîn, who gives with reference to it the legend applied by Nâsir to Gate No. 1.

7. "The Hâshimite Gates" (Muk.). These appear to be the gates leading to two cloisters (daryûzah) belonging to the Sufis, said by Nâsir (page 32) to have been in the north wall to the west of the Bâb al Asbât. It is, apparently, the modern Bâb 'Atm, which is called by Mujîr ad-Dîn Bâb al Dewatar, from a school of the same name, and said by him to have been the gate by which Omar entered on the day of conquest.

8. The "Gate of Al Walid" (Muk.) is possibly the Bâb al Ghawânimah in the north-west corner of the Haram area; it is given the same name by Mujîr ad-Dîn, who says that it was formerly called the "Gate of Abraham."

9. The "Gate of Ibrahîm" (Muk.) is perhaps the same as the Bâb as Sakar, "Gate of Hell," which is the only gate that Nâsir mentions in the west wall: it lay to the north of the Bâb Dâûd (page 31). It is apparently the modern "Bâb an Nâthir," which, according to Mujîr ad-Dîn, was formerly called the "Gate of Michael," and was an ancient gateway. The street "Akabat at Takiyeh," which runs westward from the Bâb an Nâthir, is supposed to follow the line of an ancient street, which supports the view that this gateway is on the site of a much older one.

10. The "Gate of Umm Khâlid" (Muk.). Either the modern Bâb al Hadîd or the Bâb al Kattanîn, which, according to Mujîr ad-Dîn, was in his time, as it is now, near the Gate of the Bath.

11. The "Gate Dâûd" (Muk.) is the same as the Bâb Dâûd of Nâsir. It is now the Bâb as Silsilah (Gate of the Chain), and the adjoining gate Bâb as Salâm (Gate of Peace) is the Bâb as Sakînah of Nâsir (page 43). Mujîr ad-Dîn mentions this double gate under the names Bâb as Sakînah and Bâb as Silsilah, and says that the latter was formerly called the Bâb Dâûd.

One gate mentioned by Mujîr ad-Dîn, the "Gate of Borak," appears to have been completely destroyed when the walls were rebuilt by Sultan Sulaiman in the sixteenth century. He says that the East Gate of the Dome of the Rock, called the "Gate of Isrâfil," led to the steps of Borak, which were opposite the "Dome of the Chain;" and that opposite the steps was the "Gate of Borak," so called because the Prophet entered by it on his night journey, and named the "Gate of Funerals" because they went out by it. This is apparently the Gate of Jehoshaphat of the Crusaders, but it does not appear to have been in existence when Mukaddasi and Nâsir wrote their descriptions.

The following table shows concisely the proposed identifications:—

Mukaddasi. 985 A.D.	Nâsir-i-Khusrau. 1047 A.D.	Mujir ad-Dîn. 1496 A.D.	Modern. 1888 A.D.
1. Bâb al Hittah..	Bâb al Hittah ..	Bâb an Nabî ..	Bâb an Nabî, below Bâbal Maghârîbe.
2. Bawâb an Nabî	Bâb an Nabî ..	Gate of the old Aksa.	Gate of the old Aksa. (Double Gate.)
3. Gates of the Milhrâb Mar- yam.	Bâb al 'Ain (?) .. (Gate of the spring)	..	Single Gate (?).
4. Gates ar Rah- mah.	{ Bâb ar Rahmah { Bâb at Taubah ..	Bâb ar Rahmah Bâb at Taubah ..	Bâb ar Rahmah. Bâb at Taubah. (Golden Gate.)
5. Gate of the Bir- kat Bani Isra'îl.	Bâb al Abwâb ..	Bâb al Asbât ..	Bâb al Asbât.
6. Bâb al Asbât ..	Bâb al Asbât ..	Bâb al Hittah ..	Bâb al Hittah.
7. H a s h i m i t e Gates.	Gate to the Sufi's Cloisters.	Bâb al Dewatar..	Bâb 'Atm.
8. Gate of Al Walid.	..	Bâb al Ghawâ- nimah.	Bâbal Ghawanimah.
9. Gate of Ibrâhîm	Bâb as Sakar (?)	Bâb an Nâthîr ..	Bâb an Nathîr.
10. Gate of Umm Khâlid.	..	Bâb al Hadîd or Bâb al Kat- tanîn.	Bâb al Hadîd or Bâb al Kattanîn.
11. Gate Dâûd ..	Bâb Dâûd .. Bâb as Sakinah ..	Bâb as Silsilah .. Bâb as Sakinah..	Bâb as Silsilah. Bâb as Salâm.

The page references are to Mr. Guy le Strange's translation of Nâsir-i-Khusrau, published by the Palestine Pilgrims' Text Society.

C. W. W.

THE TEN TRIBES.

THAT Israel was carried into captivity the most sceptical will hardly deny in face of the historical tablet which relates how Sargon, in 722 B.C., took 27,280 prisoners from the city of Samaria, and how he supplied their place with foreign colonists.

The question is what became of these Israelite captives, and this is one which has been very variously answered. I do not here refer to the legend of Jeremiah visiting Ireland, and of the "Stone of Bethel" becoming the Stone of Scone, and the coronation stone now in Westminster Abbey, for, as Dean Stanley once observed, this stone is of some kind of sandstone not to be found in Palestine, and certainly not at Bethel, where all is hard limestone; and these mediæval legends no doubt grew up in England long after Christianity reached our shores, much as the Boer in South Africa yet believes that the Promised Land lies not far north of the Transvaal, which belief caused misery and death to

many families during the extraordinary exodus of the "Trek Boers" north of the Zambesi.

But the question what became of Israel, and what is to happen to Israel in the future, has exercised the minds of Jews, Samaritans, and Christians from the Christian era downwards, and has been very variously answered. The Samaritan solution was simple. Israel returned to Palestine about the time when Judah and Benjamin returned to Jerusalem under Ezra. A great gathering in the Haurân was followed by an advance under the guidance of Sanballat the Levite (or the Horonite) to the sacred mountain at Shechem, and of these returning exiles the modern Samaritans are the descendants. Unfortunately, the "Samaritan Book of Joshua," in which this story occurs, is a late mediæval book, full of strange legends, mostly of Persian origin.

In the early centuries of the Christian era there appears to have been great diversity of opinion among the Jews on this subject. In the Mishnah (*Sanhed* x, 3) we read—"the ten tribes will not return" in the days of Messiah, because it is written "and the Lord rooted them out of their land in anger and in wrath and in great indignation, and cast them into another land as this day" (*Deut.* xxix, 28). On the other hand, passages were understood by other Jewish writers (*Philo* and the author of the *Apocalypse of Baruch*) in a contrary sense—"I will gather the remnant of my flock" (*Jer.* xxiii, 3), "Israel shall dwell safely" (verse 5), "and I will save the house of Joseph, and I will bring them again" (*Zech.* x, 6). It was on these passages apparently that Rabbi Eliezer relied in controverting R. Akiba's opinion that Israel would not return to Palestine.

In the second book of *Ezdras* (xiii, 41-50) we learn that the Ten Tribes are in a country never before inhabited, and called *Arzareth*, beyond a river which is to be dried up when they return.

This is perhaps the earliest foundation of a legend which attracted great attention in the Middle Ages, and induced adventurous travellers to set out in quest of the ten tribes. Mr. William Simpson has called my attention to passages in the travels of Wolff which tend to show that the idea of the Ten Tribes in central Asia survived to the present century; and other travellers have pointed out that the Nestorians claim to be of Hebrew origin. We may first consider the legends and then the historical foundation on which they rest.

In the *Korân* we find a legend, no doubt partly of Jewish origin, which relates the journey of Moses in search of El Khndr ("the green one"), who answers to the Jewish figure of Elijah as an immortal and ever present spiritual power. In the region of the Greek and Persian seas (apparently the Black Sea and the Caspian) Moses found a people oppressed by Gog and Magog. El Khndr was the Minister of Dhu el Karnein, "he of the two horns," usually identified with Alexander the Great, who on his coins has rams' horns, and who had drunk of the fountain of life and become immortal. Here also was the place where the sun sets in a miry fountain. Moses built an iron wall between two

mountains to shut in Gog and Magog, and poured molten brass over it (Sura xviii, 59-99). It should be noted that the mention of Alexander the Great tends to show that this story may have been partly of Persian origin—legends of that hero being common in Persia; and a few centuries later (in Firdusi's *Shah-Nama*, about 1000 A.D.) we get the same story in Persia, where Gog and Magog are represented as demons and giants who devoured man and beast, and who were shut up inside a wall by Alexander the Great himself.

Sir John Maundeville, in the 14th century, connects Gog and Magog with the Ten Tribes (chap. xxvi), and says that they were shut up till the end of the world between two mountain ranges in Scythia.¹ The Emperor Frederic II says, in a letter to Henry III, that the Tartars were descendants of the Ten Tribes shut up by Alexander the Great in the Caspian Mountains. As time went on, however, and as a Christian kingdom became established in Armenia, the story seems to have migrated east, and the wall was transported to the Great Wall of China in Marco Polo's time (*see* Yule, *Marco Polo*, i, pp. 50, 250, 257, 259).

As regards the river of the land Arzareth, it would seem that the localisation of the legend points to Arzareth being Erzerum, and the river probably the Araxes; and it is remarkable that a Persian legend (mentioned by Du Perron) speaks of Zoroaster, when thirty years of age, as crossing dryshod with his followers over the river Araxes, coming from the mythical mountain Elburz, where he received the *Zendavesta* from Heaven. According to a mediæval Jewish legend the Ten Tribes dwelt beyond the river Sambation, or Sabbatical River. This, though identified with the Ganges (*Mid. Bereshith Rabba*, 2; *see* Neubauer's *Geog. Tal.*, pp. 33, 386), was originally the present *Nahr es Sebt*, in Northern Syria (*Pliny, Hist. Nat.* xxxi, 2; *Josephus, Wars*, vii, 7, 5), an intermittent torrent which I have noticed in "Heth and Moab." *Josephus* says it flows on the seventh day; *Pliny*, that it flows six days and rests on the Sabbath. *Josephus* was nearer the truth, for the rise of the stream is uncertain, and it runs only for a few hours. Thus the mystic river, like the wall of Gog and Magog, was never certainly identified.

Local traditions appear from an early date to have represented the inhabitants of Georgia and Kurdistan and of Bactria, east of the Caspian, as descendants of Israelite tribes.

Thus Benjamin of Tudela, who travelled in the twelfth century from Spain to inquire into the condition of the Jews in the East, speaks of four Israelite tribes in Bactria living under independent rulers. The Nestorian Christians who live in the Kurdish Mountains on the borders of Armenia,

¹ About 1244 Matthew, of Paris, says of the "Enclosure of the Caspian Mountains": "There dwell the Jews whom God shut in at the prayer of King Alexander, who shall come forth before the Day of Judgment, and shall make great slaughter of all kind of folk. They are shut in by mountains, high and great, and cannot come forth." He thus identifies them with Gog and Magog of the book of Ezekiel.

having been driven by Timur and the Mongols from Mesopotamia, are said to claim to be descendants of the tribe of Naphtali, and are closely connected with the Jews of that region. According to Dr. Wolff (*Travels*, vol. ii, published 1861), the inhabitants of Merv and Khiva were regarded by the Jews of that region as descendants of Hivites, Perizzites, and Jebusites,¹ who fled from Joshua to the Caspian and went yet farther north in little boats; and the Jews had, it appears, intermarried with Turkomans of Khiva, whom they regarded as Hivites.

Now, if, as I believe to be the case, the Canaanites were a Tartar people, the Bactrian Jews were not so far wrong. The story shows that a Jewish influence must have existed for some time in the Turkoman country, and we are consequently interested in tracing its history.

The corner of Asia with which we are concerned is one which on account of its mountainous character has always been the hiding place of oppressed nationalities, and the existence of a very mixed population in this region is generally admitted. Thus Armenian is an Aryan language full of Turanian words. The Medes of the time of Cyprus were a mixed Aryan and Turanian people. The Georgian language is inflexional, but many of its particles are apparently Turanian, and the term Alarodian, by which the Caucasian languages are described, serves mainly to show how little is known about them. In the Kurds we have descendants of the Parthians, and, till quite recent times, they preserved the Parthian horn bow; and, in addition to these mixed races, the Jews in the Byzantine age, and subsequently when Islam first conquered Persia and Mesopotamia, fled from alien oppressors of other faiths to the region north of the Caucasus, between the Crimea and the Caspian.

In this connection it is interesting to note that rude sculptures occur both in Turkestan and in Southern Russia, which have been supposed to be of Scythic origin. We may finally discover in these monuments akin to those of Asia Minor and Northern Syria; one of these statues, described

¹ In another passage he includes the Hittites. Now the Hittites were by no means a "peculiar people," they were only one out of numberless Tartar tribes, and it is remarkable that a great tribe existed west of Manchuria, called Khitai (bounded on the west by the Gobi desert, on the north by the Pohai Tartars, and on the south by China); their language approached the Mongol and the Tunguse. Here, rather than among the mixed populations of Georgia, we may seek the Hittite type. The history of the Khitai is traced back to 230 A.D. Their name is said to mean "tattooed," or "painted red"—a practice found among Etruscans, Romans, Guanchos, and Hottentots, who all painted themselves red in sign of rejoicing: but it may have other derivations. (See J. R. A. S. xiii, II.) Tch'ang Te, travelling in 1259 in Turkestan, west of Kuldja, was told that the Kitai formerly dwelt there. Plano Carpini, in 1245, found the "Black Khitai" east of the Aral Sea. Rubruquis, in 1253, says they used to dwell near Lake Balkash (*see* Schuyler's *Turkestan*, I, note 3). Thus the Khitai were believed to come from Turkestan itself, where languages closely akin to the ancient Melic and Akkadian are still spoken.

by the Chinese traveller Sui-Sun, near Lake Issyk-Kul, represents a man girt with a sword, and placing his left hand to his forehead (compare the Hittite figures for this attitude), and in the same vicinity, north-east of Kashgar, Colonel Tchaikofsky found a human face, with a long text in a character which he supposed to be Thibetan. Further information as to the supposed Scythian statues would be of interest.

No less than 700 Hebrew tombstones, with inscriptions dating from about the second to the tenth century, have been found in the Crimea. The sect of the Karaites, to which these Jewish emigrants belonged, was akin to that of the Sadducees, and their alphabet was the square Hebrew which originated in Aram. They appear to have begun to spread northwards in the Roman age, during which the Jews, already strong in Egypt and in Mesopotamia, were dispersing all over the Roman world, and had their cemeteries also at Naples, Rome, and elsewhere in Italy (*see* "Syrian Stone Lore," p. 228). The same kind of movement which drove the Karaites to the Caucasus may, without any great improbability, have driven some of the Israelite captives from Assyria at an earlier period to the same region;¹ but, on the other hand, the whole account may be of Jewish origin.

Carmoly, in his valuable notes on the Khozars, shows us how the Karaites came to be so numerous in this region. The Khozars, or Khazars, were a Turkish people who lived west of the Caspian, which was at one time called the Sea of the Khozars. They occupied the Crimea and the region of Daghestan, near Derbend. It is related by Moses of Khorene that they invaded Armenia about 178-198 A.D. In 449 they were under the power of the Hunns. In the 6th century they were sufficiently powerful to attack Persia, but Khosru Anurshiwan is said to have shut them in by building the Caucasian wall, of which the ruins are said to exist in the passes of Daghestan, near Derbend.² In 625 Herachius made peace with the Khazar king near Tiflis. In 661 Rabi'at el Bahli was sent by the Khalif to attack the Khozars, but they allied themselves with the Greeks and repulsed him. In the 10th century their power appears to have extended from the Sea of Asof to the Crimea. The Mongols subdued them in 1221, and found many Christians among them.

To this pagan kingdom the Jews fled from Christian persecution in the time of the Byzantine Emperors Basil I and Leon VI, and later on the Christians fled to the same region from the Moslems. It is related by Moses bar Nachman, and by others, that in 740 A.D. a certain Is-hak Sindjari converted the King of the Khozars to Judaism, and many of his subjects became Jews. This curious kingdom is described by Ibn Haukal in 921 A.D., and by Mas'udi in 943 A.D. In 958 the Minister of

¹ In 2 Kings xvii, 6, we read that Israel was taken to Halah, Habor, and "the cities of the Medes." Media lay just south of the Caspian.

² Such defensive walls were of early construction. Arrian (iii, xviii) says that Alexander found the Persian Straits blocked by a wall with towers south of Ecbatana (Hamadan) as he advanced into Media.

the Spanish Khalif, 'Abd er Rahman III, who was a certain Chasdai Ibn Is-hak Ibn Ezra Ibn Sprot, hearing of this Jewish kingdom in the Caucasus, wrote a letter (which Carmoly gives) to the Khozar King, which was answered. These letters were published by Is-hak Akrish in 1575. In 1175 the Jewish traveller Petachia, of Ratisbon, set forth to find the Ten Tribes, of whom the Khozars now claimed to be representatives, and, passing through Persia and Media, he found the tribe of Issachar in the mountains beyond—in the Khozar country.

According to Ibn Haukal, in the 10th century there were 6,000 Moslems among the Khozars. The king was a Jew, with 1,200 soldiers; and at the city of Asmid was another allied Jewish king.

Some Khozars were Turks, black-haired; some were very dark, like Indians, some lighter (perhaps Aryans); the latter, he says, sold their children—as the Georgians have always done. They practised the "happy despatch" (like the Chinese), and called their king, who was always a Jew, the Kha-Khan.

Mas'udi, twenty years later, says that all the Court of the Khozar kings consisted of Jews who had come from Moslem and Christian countries. There were pagans of different races among them, and some burned their dead and practised suttee—probably Aryans. They traded in the skins of black and red foxes.¹

There is thus little difficulty in understanding the mediæval ideas about the Ten Tribes. The region in which they were supposed to dwell was the region where the Jewish Kingdom of the Khozars actually existed from 740 to 1220 A.D.—nearly five hundred years—together with the adjoining regions in Bactria, east of the Caspian, which were no doubt influenced by them. Hence the confusion with the Tartars, and with the biblical Gog, for it is generally admitted that Gog (*see* Ezekiel xxxviii, xxxix), connected with Tubal and Ashkenaz (*cf.* Gen. x, 2), represents a Caucasian people.

The legend of the wall originates either in the wall which Alexander stormed in Media or in the later wall of Chosroes, north of the Caucasus, which was built before the Koran and the Shahnamah were written. The story of the river is older, since it is mentioned in Ezdras—probably in the same region (Arzareth; perhaps the western region Arzah of the Persians, Bundahish xi, 4); but, as already mentioned, it is connected with a Persian legend. Those who in more recent time have sought the

¹ There was a great skin trade with the north in Crusading times, when *Fair*, the skin of the Siberian squirrel, was so highly esteemed. The *peltry* or "skins" of the Land of Darkness are mentioned by the mediæval geographers, and the trade with the unseen inhabitants of these Arctic regions is noticed by Ibn Batuta and Abu el Feda (*see* Col. Yule's "Marco Polo" ii, pp. 414, 415). From a recent paper in the "R. E. Journal" I gather that the Jewish early population in the Caucasus is not yet extinct. In Daghestan and the districts near it about 30,000 souls still reside, but as a decreasing population. Their most remarkable custom is the painting of the face (like Jezebel) by the women, who are said to paint broad bars of yellow and red across the face.

lost tribes in Bactria¹ have, it seems, forgotten the existence of this Jewish influence, lasting for five hundred years on the shores of the Caspian, and extending much further east, for there were Jews in China, as Ibn Batuta mentions—and even as early as the 2nd century A.D. A Jewish-Chinese text of 1511 speaks of a synagogue in Pien in 1164 A.D.

But, while the fact of the eastward spread of the Jews is thus historically traced, it is certainly curious that they regarded themselves as descendants of tribes other than Judah and Benjamin. They may have been preceded by Israelites of those tribes, but it is equally probable that the reason lies in their own knowledge of Bible history, which recorded the return of the two tribes under Ezra. Nor must it be forgotten that a descendant of Asher is mentioned in Jerusalem in the New Testament (Luke ii, 36).

C. R. C.

THE HITTITE MONUMENTS.

SOUTHAMPTON, 23rd May, 1888.

THE series of articles in *Nature*, based on the lectures of Mr. Thomas Tyler (January, 1888), having now terminated, I would beg to be allowed to make a few remarks on his work. I have no desire to raise controversy, or to force my own views on any who may not agree with me, but, Mr. Tyler having seen fit to allude to my work, and to bring charges of inaccuracy against me, it is evident that I may be considered as bound to answer. Another reason for speaking lies in the fact that many of Mr. Tyler's comparisons are either identical with, or closely similar to, those which I have put for-

¹ In a very interesting paper, Sutlej Pujahs (J.R.A.S. xvi, 1), Mr. Simpson quotes from Bellew's Journal of a Political Mission to Afghanistan, 1837, who again quotes from Afghan legendary histories an account of the Tabut i Sakinah, or "Ark of the Shekinah," among the Afghans, who call themselves Beni Israil. The Hebrew history may, as he suggests, have come into Afghanistan with the Moslems, but there is another possible origin. One of the authorities quoted is Habb ben Mania, "the Son of Manes." Now the Bundahish agrees with Mas'udi in making the Turko-Tartar tribes in Turkestan, and as far as China even, Manicheans, in the 10th century or earlier, and Manes included Jewish ideas in his great syncretic system.

The word Tabut is applied by Shi'ah Moslems (who have much in common with the Manicheans) to a model of Husein's tomb.

Arks were very commonly used in Asia by the Babylonians and Egyptians and Phœnicians, as well as by the Hebrews. The Canaanites had arks, according to a text translated in "Records of the Past," as early as 1600 B.C. The Khitai in Cathay, in the 10th century, had a consecrated tent used as a temple during their war expeditions.

As regards Manes, however, it should be noted that the legendary ancestor of the Kirghiz in Turkestan was the giant called Manias.

ward at different times between 1883 and 1887; and, although Mr. Tyler is clearly acquainted with my writings, he has not thought fit in these cases to acknowledge my priority. Not that I stand alone in this respect, because in some cases discoveries by Professor Sayce have in the same way appeared in these papers without note as to their origin.

I first began to study these monuments in 1880, and have devoted nine years of leisure time to the subject with the assistance of very well known scholars; and I may perhaps, therefore, be allowed to remark generally that Mr. Tyler's papers show only an imperfect knowledge of his subject. He claims to set forth "just principles," and to found his work on "very recent" discoveries. Yet, with exception of a seal from Tarsus, which, as he allows, advances our knowledge very slightly, he refers to nothing which has not been known for many years to students of the subject, while, as regards principles, I am at a loss to understand what these are, unless they be the Pythagorean and abstract meaning of one or two emblems—a speculation which Professor Sayce last year dismissed with a curt (and I fear I must say contemptuous) note in the Academy. Mr. Tyler has picked out a few emblems here and there in an arbitrary manner. He has not adopted the only methods which seem capable of giving scientific results, namely—1st, the comparison of all the combinations in which any emblem is known to occur; 2nd, the comparison of Altaic emblems with known phonetic and ideographic values in other systems; 3rd, the use of the *sounds* recoverable from Cypriote.

Before noticing details I would ask to be allowed to explain the principles on which I have attempted the decipherment, which are either not understood or else ignored by Mr. Tyler. It appeared to me that the emblems must be treated as a cypher is treated, by observing the relations which they bear to each other in as many cases as possible—a method by which Mr. Tyler might have avoided palpable errors. It further appeared to me that a knowledge of the ideographic (or picture) value of the emblems was attainable by comparison with the use of similar emblems in other systems—such as cuneiform Egyptian and Chinese—rather than by relying, as Mr. Tyler so often does, on conjectural values based on nothing but arbitrary suppositions.

Finally, in 1883, after consultation with the lamented Dr. Birch, with Dr. Isaac Taylor, and with Professor Sayce, I came to a conclusion which the first of these authorities suggested to my mind, but which was not then held by the other two, namely, that the Hittites were a Turanian tribe, and that their language was probably akin to the old Turanian speech of Chaldea and Media.

To Professor Sayce is due the discovery that in the Cypriote emblems we have the hieratic forms of the Hittite emblems. This suggestion seemed to me at first unproven in view of the eight comparisons in Dr. Taylor's "History of the Alphabet" (six of which are, I think, wrong), and of Professor Sayce's comparisons with the early and inaccurate copies of the Hittite texts. When, however, I became possessed of complete lists of these Cypriote characters it became clear to my mind that Professor

Sayce's principle was sound, and I have now proposed forty such comparisons.

From the Cypriote emblems *sounds* are derivable, which, as Dr. Taylor saw, might serve to fix the language of the texts. It does not appear to me that Professor Sayce made sufficient use of these sounds when he attempted to decipher the texts (*see* his proposed readings in Wright's "Empire of the Hittites"), and it was through these sounds, and through an analysis of the "cypher value," so to speak, of each emblem, that I arrived at the results published last year. No scholar had, as far as I know, before that date been able to show either the phonetic or the grammatical values of the emblems in such a manner as to connect them with an Asiatic tongue. The values assigned had always been as arbitrary as was the assumption that the texts are historical.

During the present year I have published (*Quarterly Statement*, April, 1888) the results of another year's study of the question, and have shown in a manner which has met with acceptance from many scholars that the proposed values agree, not merely with the sounds of the dead languages of Media and Akkad, but with those of the living Turko-Tartar and Ugrie languages—a result further confirmed by comparative study of 30 personal and 200 geographical names from the Hittite country.

The present state of the question is this : Dr. Isaac Taylor has lately expressed his present belief that the Hittite chiefs were Turanians, and his opinion on my recent paper is most satisfactory to me.

Mr. T. G. Pinches and Mr. G. Bertin, who are probably the best Akkadian scholars in England, have told me that the important words *Ku* and *Ma* on the bilingual are (as I urged) Akkadian. Mr. Bertin, author of the "Grammar of Cuneiform Languages," just published by Trübner, states that he thinks my comparison with Akkadian represents the safest method of study, and Mr. Pinches believes that a people speaking some such tongue must have lived near Carchemish. Professor Sayce, while regarding the Vannic language (akin to Medic) as the best for comparison, is also, I believe, now in agreement as to the Mongolic type of the Kheta, and as to the agglutinative character of their language.

I might then afford to disregard the opinion of a writer who seems as yet imperfectly acquainted with the subject, were it not that he charges me with inaccuracy in a manner which I feel to be undeserved.

All that I claimed in 1887 was to have discovered the group to which the Hittite language belonged, and to have commenced the decipherment on principles not arbitrary or conjectural. The method which I adopted has obtained increasing favour with scholars, and I feel no doubt that the discovery of the language will in time lead to a complete decipherment.

As regards the proposed comparison of Hittite, Vannic, and Medic with the Georgian and other languages of the Caucasus, all that can at present be said is that these languages have been tried, and have not

served to give such results as are obtainable from the Ugro-Tartar Group.

I now proceed to substantiate the statements which I have made as to Mr. Tyler's papers, in detail. So far as he reproduces the work of Chabas, Brugsch, and Perrot, and the later publications of Dr. Sayce, which are available to the general public in Wright's "Empire of the Hittites," his work may be useful, but these are not new discoveries, since Chabas wrote his monograph in 1866, and Professor Sayce's chief discoveries date from 1876 and 1880. I am also in agreement with him in those cases where he apparently adopts suggestions of my own. As regards his original work, I think that it will tend rather to produce controversy and confusion than to contribute to the cause of science.

Mr. Tyler states that certain hypotheses ("and vagaries") repugnant to the scientific spirit have of late been advanced, yet he himself adopts, without question, two most improbable ideas: 1st. The existence of Hittites (as an empire or otherwise) throughout Asia Minor. 2nd. The Hittite origin of all monuments on which a curly-toed boot is represented. As regards the first, the Bible, the Egyptian monuments, and the cuneiform texts agree in representing the Hittites as an important tribe of Northern Syria. The monuments speak of no Hittites elsewhere, nor does Herodotus or any other ancient author. It is certain that there were tribes of kindred race and civilisation north, north-west, and north-east (and I believe also south-east) of the Hittites; but when Mr. Tyler adopts my view¹ as to the independence of these various tribes he might also set an example in discontinuing to use the unscientific term "Hittite" in describing the Altaic or Turanian hieroglyphs.

As regards the curly-toed shoe,² Mr. Tyler might have satisfied himself that the Egyptians wore it, for there are several pairs in the British Museum. The Etruscans and Armenians alike wore it, as did and do the Crusaders, the Turks, and the Arabs and Kurds. It is not unlike the Chinese and old Japanese shoe; and it is somewhat absurd to class ancient peoples by their boots, especially when the information relied on is so partial and misleading.

The pigtails of the Kheta were, I believe, first noticed by Dr. Birch. I called attention to them in 1883.³ Mr. Tyler does not refer to the latest information (the casts by Mr. Flinders Petrie), and he should have known

¹ See "Heth and Moab," 1st edition, p. 422, 1883; "Syrian Stone Lore," 1886, p. 23; "Altaic Hieroglyphs," 1887, p. 8, &c.

² Dr. Sayce calls this a "snowshoe," and says it is adapted for walking on snow. It is true that it resembles a skate of old-fashioned form in having a curl in front, but it bears no resemblance to any snowshoe worn by northern peoples. These are always large flat surfaces for distributing weight. As I have attempted to walk on snow in the ordinary Turkish shoe, I may be allowed to say that it is less fitted for the purpose than an English boot. Sir C. W. Wilson put forward a much sounder comparison some time since with the boot now worn in Asia Minor.

³ See "Heth and Moab," 1st edition, p. 22.

that Rossellini's drawings have been found not to be thoroughly reliable. He would then have avoided the error of reproducing these in Fig. 2. The comparison with the Manchu Tartars which follows represents the theory which I have steadily advocated now for five years. Some of his observations on the point are, however, of value. The pigtail is certainly not characteristic of female figures, as he states Professor Sayce to have asserted; what is represented in the case of females is probably a long plait of hair like that worn by the Etruscan women. The British Museum contains a magnificent example of these long braids in the terracotta figure of an Etruscan woman.

Mr. Tyler allows that the word *Sar* cannot be purely Semitic when it is suffixed. The remark is not new, but Mr. Tyler omits to point out that in Akkadian *Sar* for "prince" or "chief" has just this position (as I noted in 1886),¹ and that it is a very common Turanian word, whence the Russian *Tsar* is derived. In the next sentence he refers to *Bek* as Mongolian, but unfortunately forgets that the words he quotes are names not of persons, but of towns. I have recently shown² that the word occurs as meaning "fortress" or "shrine" in many Tartar and ancient Turanian dialects.

Mr. Tyler thinks that the figures at Boghaz Keni represent kings and Amazons. He does not say what nations used to stand erect on the backs of lions and of two-headed eagles. He omits the figures with wings which occur in this sculpture, and he does not refer to the well-known representations of Asiatic deities erect on various animals. As to the supposed "mural crowns," he reproduces an observation by Professor Sayce, but I confess that Perrot's original drawings, from which he gives a somewhat inaccurate sketch, do not indicate mural crowns, but only bonnets such as are still worn by Tartar women. The sticks in their hands are not curved, as he supposes, and certainly do not represent bows. As to the Amazons, even they did not ride two-headed eagles—Herodotus mentions them as Turanians in Scythia—and it is to Professor Sayce that a suggestion of their connection with the Hittites is due. I hope hereafter to demonstrate that they were Tartar queens.

The mandrake theory does not demand more than a passing notice. In none of the known systems of hieroglyphic writing does the mandrake appear as an emblem. The Hittite (or Altaic) emblem appears to mean "male deity."

As regards the bilingual, which Professor Sayce first recognised as such, Mr. Tyler's proposals are ingenious, but not likely to be accepted. In the first instance, his reading of the name of the country is clearly wrong. The characters, as Mr. Pinches and Professor Sayce have seen, read *Urme*, not *Zume*. The emblem bears no real resemblance to the cuneiform *Zu* at any period, but is clearly the cuneiform *Ur* or *Eri*, even in comparatively early forms.

The suggestion that these hieroglyphs represent a Semitic speech

¹ "Syrian Stone Lore," p. 16.

² Palestine Exploration Fund, *Quarterly Statement*, April, 1888, p. 82.

contradicts the opinion of all who have given much attention to the subject. Semitic writing, as known to us, is syllabic or alphabetic—as is natural for an inflexional language—and not ideographic, as is natural to non-inflexional speech. A word like *Sacer*, containing a strong guttural, would probably be represented by two syllables, and if the second emblem on the bilingual be compared with the earliest form of the emblem *dim*, used in Akkadian, it will be seen that this value is more probable than is the tri-syllable *Kutimme*. As to the cone, Mr. Tyler follows Professor Sayce in rendering it “king,” but regards the double cone as meaning “people.” This is purely arbitrary, since in no known hieroglyphic system does any parallel exist, whereas, if it mean “country,” which would upset Mr. Tyler’s reading, it may be compared with emblems for country and mountain in Egyptian, in cuneiform, and in ancient Chinese.

Mr. Tyler is, I think, wrong in regarding the fifth emblem as unique, since it resembles an emblem often found on other texts; and certainly it in no wise suggests an idiogram for country. As regards the sixth, he adopts a comparison which I suggested in 1887¹ for the first time, only he gives the Assyrian value instead of the Akkadian,² in which he is, I think, wrong, since the Akkadian is the older, and because a series of strokes represents the plural in other hieroglyphic systems. According to the values which I obtain from Cypriote sounds, the Hittite emblems (so called) read *Tark-dim-Ku-ma-erne*. *Ku* and *Uk* occur for “king” in Akkadian, according to many scholars, and recall the Chinese *Chu* (older *Ku*) and the Tartar *ok*, meaning “Lord.” *Me*, *Ma*, *Mu*, is a common word for “country” in Ugriic speech. *Me*, for the plural, is known in the Medic, and, according to Professor Sayce, also in Akkadian.

Mr. Tyler is also unaware of the meaning of the word *Tarku*, or *Tarkon*. It is a common Tartar word for chief, and has been traced from Siberia as far as Italy, where Dr. Taylor has recognised it in the Etruscan Tarquin.³

As to the idea that some of the emblems on the boss are inverted, it may be noted that ancient scribes were not accustomed to write upside down as a rule.

Mr. Tyler regards the comparisons of Cypriote and so-called Hittite as “visionary.” I must leave him to settle this with Mr. Perrot, Professor Sayce, Dr. Taylor, Dr. Deecke, and the other well-known scholars who hold the opposite view. The resemblances are often so remarkable and exact in detail as to leave no doubt on the mind. It is natural to suppose that the Cypriote or Asianic script, belonging as it does to the same country in which the older Altaic hieroglyphs are found, bears to them the same hieratic relation that the later Egyptian writing does to the monumental hieroglyphics of Egypt, or that the cuneiform

¹ “Altaic Hieroglyphs,” Plate IV, Fig. 10.

² “Altaic Hieroglyphs,” p. 161, Plate II, Fig. 14, p. 48.

³ See Palestine Exploration Fund, *Quarterly Statement*, April, 1888, p. 78.

bears to the archaic Akkadian ideograms. We have also transitional inscriptions found of late, which serve to connect the early and the later incised forms.

Mr. Tyler states that I have not given the Hittite emblems in my latest work "with such essential accuracy as is desirable," but he cannot substantiate this assertion. I have studied the original monuments and the casts, and have drawn the emblems from these. Mr. Tyler's rude sketches are often clearly from drawings and photographs, and I am prepared to point out the inaccuracies of these sketches, and of his reproduction of the Yuzghâd Seal, of which a good photographic reproduction was published in 1886.¹

As regards the texts occurring on statues of the gods, I adhere to my previous statement. At Boghaz Keni some figures, not reproduced by Mr. Tyler, are winged. The others, standing on animals, have been recognised as deities by Professor Sayce, and any student of ancient symbolism will know that he is right. A text from Jerabis, not yet in England, occurs on a plaque presenting a winged female figure. One of the figures at Ibreez certainly represents a deity. The Babylonian bowl is generally admitted to have on it a votive text, and the question of religious connection is thus reduced to a few texts which present a very similar group of emblems to those found on the texts above noticed.

Of course the "analogy of (historic) Assyrian inscriptions" cannot show that other texts must be historic, for this is purely begging the question. There are innumerable ancient texts, Akkadian, Egyptian, Assyrian, Etruscan, and Greek, which are votive, not historic. The Akkadian magic texts, as I have before noticed, present a very close parallel to my proposed readings of the so-called Hittite texts. The great stone lion in the British Museum, which I compared with the Lion of Merash (a comparison which Mr. Rylands afterwards adopted), bears an invocation to Istar; and I am unable to see that "heads of oxen and asses" have any necessary connection with war.

Mr. Tyler has not thought fit to explain my views or to state the language which I recognise on these monuments. He selects one of the most fragmentary and defective of the texts, and gives the impression that the gaps on the monument are gaps in my decipherment. Even then there is more that is consecutive than in his own arbitrary selection of portions of certain groups. If the order of the words as I place them were in accordance with English syntax, that would be a certain mark of ignorance on my part. Turanian syntax is entirely different from either Aryan, or Semitic, or Egyptian syntax. We have to deal with a language of suffixes, with a verb placed at the end of the sentence, with post-positions and affixes. It is because I am able to identify these in their proper grammatical position, and because I have recognised (as Professor Sayce admits) "packets" as in agglutinative speech, and small suffixes with larger strong roots (as he also admits), that I

¹ Proceedings Soc. Bib. Arch., November, 1886. Note by Mr. E. A. W. Budge.

feel safe in identifying the general structure of this new dialect of Turanian speech.

Mr. Tyler states that "the Hittite inscriptions are in the main ideographic or pictorial." That they are not purely pictorial is very easily proved. That they are ideographic is one of my chief contentions, and indeed I do not feel sure that I have not rather exaggerated than otherwise the exclusively ideographic value of some of the emblems.

As to the Yuzghâd Seal, I do not think any scholar will suppose it to represent the "successful chase of the stag," and Mr. Tyler's reproduction contains errors on which he bases assertions. The seal, like the Tarsus Seal, is one of a large class, possibly of Turanian origin, and probably used as amulets. The Babylonian sun deity and the bull-horned Ea occur on it, but it is as doubtful if any of the emblems have value as ideograms as in other cases. The supposed "trident" does not even in Mr. Tyler's sketch (and still less on the original) resemble a trident at all, but a tree. As regards the curious emblem (Fig. H.), Mr. Tyler adopts my suggestion that the crescent moon is intended,¹ but there is no reason why he should select the triangle only out of the several phonetic emblems which occur with it. The supposed "baby" on the Yuzghâd Seal is not a baby on the original, nor do monumental females hold unfortunate infants by the neck, but nurse them in their arms. I am not acquainted with ancient races who adored triangles, though the cone was a Phœnician sacred emblem.

Mr. Tyler's suggestion to read all the texts "hind before" will not meet with approval. All scholars are agreed that the Hittite emblems face to the beginning of the line (a comparison of H. 1, 2, 3, 5, and J. 1, is sufficient evidence), just as in Egyptian or in the early Akkadian cuneiform. It follows that all Mr. Tyler's attempts to read are vitiated by his error in reversing the texts, as well as by his arbitrary selection of a few emblems, which is contradicted by comparative study of the groups.

Mr. Tyler regards the emblem, which he incorrectly describes as a parallelogram and two squares (which is not the normal form), as "the sign for plurality." Further study will show him his error. The emblem is known in more than ninety cases, and is very frequently a prefix. In no Semitic tongue is the plural prefixed, nor is the plural emblem prefixed in any Asiatic system. It is true that Bantu languages have prefixed plural sounds, but Mr. Tyler will not find such a language in Western Asia. Clearly he is wrong about a very important emblem, and wrong because of insufficient comparative study. The Cypriote *Ne* so exactly compares with the emblem in question as to make it certain that the common demonstrative and personal pronoun of that sound, found in numberless Turanian dialects, ancient and modern, is to be recognised, and this identification, which I proposed last year,² has been admitted to be probable by various scholars, including Professor Sayce.

¹ "Altaic Hieroglyphs," p. 182.

² "Altaic Hieroglyphs," p. 39.

That the closed hand¹ represents "power" is also not a discovery of Mr. Tyler's, but a remark which I believe I was the first to make, and he cannot claim priority in fixing the value of the "foot" for going.² I might add a great deal in confirmation of the ideographic values which Mr. Tyler here gives—a year later than myself. The idea that the figure (Fig. K.), which commences several texts, represents "a servant," rather than a king, also suggests an observation which, I believe, was not made by any previous writer, but which I have somewhat lengthily elaborated, to the effect that this attitude signifies "supplication."³

The suggestion that the Babylonian bowl was carried to Babylon as a trophy I made in 1886,⁴ and I am not aware that it is to be found in any book before I first made a note on the subject. As to the supposed "agricultural implements," I am familiar with the threshing sledge used in the East, and see no resemblance to the Hittite emblem, nor is Fig. N. at all like a plough, or like any ancient representation of a plough. If Mr. Tyler had compared the various recurrences of this emblem, he would not have selected this cut. The figure above (M.) is like the oldest form of the cuneiform *Ri*, and like the Cypriote *Ri*. It occurs in the name of a deity on the bowl, and there was a well-known Akkadian deity called *Ri*.

As regards the Shaduf, the suggestion is due to Professor Sayce, as should have been acknowledged. The explanation of the final group of the Hamath stone No. 3 is, to my mind, most improbable. The emblems are really used phonetically, and the supposed ideographic value is based in part on a copy from a very imperfect cast. The very abstract and philosophical meaning attributed to the emblems is not supported by our knowledge of other hieroglyphic systems.

As regards the emblem which Mr. Tyler supposes to represent Ashtoreth (and apparently he thinks that all gods had this name), no sound argument is given in support, and the group, Fig. Q., No. 2, is not correct. The identification of the sacred tree is due to Professor Sayce. The identification of the heads below, as representing "spiritual beings," agrees with a view which I proposed last year, only I regard them as demons and Mr. Tyler as gods.⁵ The gods are not, however, so represented by ancient peoples, whereas similar heads representing demons are often found in Etruria and are known in Chaldea. The opposed attitude is also that in which demons are often represented, as I have long since remarked.⁶ Horns are proper to demons in many ancient systems.

Mr. Tyler takes up Professor Sayce's discarded view that the Hittite emblem for deity really represents city. There is an argument in favour of its meaning deity which he overlooks. The very group which he

¹ "Altaic Hieroglyphs," pp. 52-192.

² "Altaic Hieroglyphs," p. 54.

³ "Altaic Hieroglyphs," p. 53.

⁴ "Syrian Stone Lore," p. 26.

⁵ "Altaic Hieroglyphs," p. 206.

⁶ "Altaic Hieroglyphs," p. 93.

sketches (Fig. R.) occurs on a seal, with a star (the common Akkadian emblem for deity), instead of the conventional eye.¹ As regards the central emblem, it is not always lozenge-shaped; and, as regards the eagle, Mr. Tyler adopts my view that it is the celebrated sun eagle, but does not acknowledge the loan.²

The remaining groups require no notice. They are read backwards, and separated from their context in an arbitrary fashion. The value *su su* is given to the emblem, which a careful comparative study would show Mr. Tyler to be the *Me* of the bilingual, and two ideographic values are borrowed from my system without acknowledgment. The remarks on Fig. U. are due to Mr. Tyler's having worked from a photograph. Had he carefully inspected the original text, he would have seen that the weathering is represented on the photograph in a misleading fashion.

The Tarsus Seal belongs to a large group. Mr. Tyler should have mentioned the Lydian and Cappadocian cylinders figured by Perrot, which are much more instructive, but in the same style, representing deities of Turanian or Semitic origin.

As regards the supposed triangle, it is, I think, a cup, like that often held by deities. It is unfortunate that in Fig. Y. a broken cuneiform emblem is reproduced lying on its side. There are numerous complete examples of this archaic form known, and in these a stroke, broken off in the specimen selected, exists, and shows that it is not a triangle, but perhaps, as Mr. Bertin thinks, a cup.

The comparison of the ankh with a Phœnician and a Hittite emblem is, I think, sound; I first proposed it in 1883, and have compared the Phœnician and Egyptian also in 1886.³

It would have been more to the purpose, had Mr. Tyler noted that the Cypriote value is *Er* or *Ra*, which as a Turanian word means "power."⁴ The triangle has clearly no connection. The Indo-Scythian coin is also very different, and these coins are much too late to compare safely.

Mr. Tyler doubts the age of the texts. He forgets that in one case at least there is evidence that the text is older than 1340 B.C.⁵

It is no great pleasure to me to write this criticism; but before charging me with inaccuracy Mr. Tyler must look at home. He has not fairly represented my method or principles, and his proposals, as I have shown, repeat those which I have made ideographically in the majority of the emblems of which he treats. I have much yet to say on this important subject, but the above is a sufficient answer to Mr. Tyler's papers.

C. R. CONDER.

¹ "Altaic Hieroglyphs," p. 245.

² "Altaic Hieroglyphs," p. 82.

³ "Syrian Stone Lore," p. 72.

⁴ Palestine Exploration Fund, *Quarterly Statement*, April, 1888, p. 100.

⁵ "Altaic Hieroglyphs," p. 156.

EARLY RACIAL TYPES.

THE publication of the photographs from casts taken by Mr. Petrie in Egypt gives us very valuable and authentic material for the consideration of racial types as early as the 14th and 16th centuries B.C.; but the study of these types will not be complete until these pictures are compared with the representations of race which occur in Asia Minor, Mesopotamia, Phœnicia, and Etruria.

The cuneiform texts appear only to distinguish two races, 𐎶 𐎵 , "race bright," and 𐎶 𐎶𐎵 , "race dark," as mentioned also in the story of Sargina. The Egyptians, on the other hand, distinguished four races: 1, white (Lybian); 2, brown (Asiatic); 3, red (Egyptian); 4, black (Negro), all of which are traceable as early as the 16th century B.C.

The Bible distinguishes three races: Japhet "the fair," including the people of the Caucasus and some tribes of Asia Minor; Ham, whose name comes from a root meaning "hot," whence the Assyrian Khammu, "midday," or the "south;" and Shem, including the peoples usually called Semitic, and apparently meaning "dusky."

On the monuments now copied there are five very distinct types: 1, white, blue-eyed, with light hair; 2, the red Egyptian; 3, the bearded Semitic people, reddish or yellow; 4, the Negro; 5, the hairless brown or orange race, with receding forehead and a big nose from straight to aquiline.

As regards complexion, there are several points to be considered. In some cases the colours have faded, so that we have green eyes and hair. In other cases figures are alternately red and yellow for pictorial effect. As regards the red, it is not certain that this represents natural skin colour. The Guanchos, the Etruscans, the Romans, the Hottentots, and the Red Indians alike have had the custom in different ages of colouring themselves. The Zulus paint white, the Hottentots orange, the Guanchos painted red, white, yellow, and green. The Red Indians also paint themselves many colours. Again, in Etruscan pictures the men are very red or dusky, but the women are white. The great terra-cotta group in the British Museum represents an Etruscan woman yellow, and the man with her is dark or sunburnt; yet the type of face is exactly the same: on Etruscan vases and in Etruscan tombs the men are painted red and the women left white. The colours on the monuments are, therefore, not a safe guide for the student.

As regards the four Egyptian races, the following reflections occur to me after comparing the photographs with other authentic representations:—¹

¹ The following are the types with which I am familiar in Syria. 1. The Aramean; dark, red-brown, aquiline, heavy beard, as seen in the Fellahin. 2. The Arab; dusky, aquiline, scanty hair and beard, and very much lighter build. 3. The Turkoman; approaching the Turk, with Turanian round head

1. The light people with blue eyes may be an early Aryan type. The Kabyles probably offer the nearest approach—a long-headed white race, with blue eyes and light hair, on the south side of the Mediterranean. The Guanchos seem to have been much the same. The cheekbones are said by Mr. Wallachs to be prominent, the nose straight, the forehead somewhat receding. The Guanchos were a tall well-made people. If it be the case that one of these light people is an Asiatic, it seems probable that the early Aryans spread in Western Asia earlier than scholars are inclined to suppose, and there can be little doubt that they existed in the Caucasus some time before 500 B.C. How they reached Lybia is at present unknown; perhaps by sea from Greece, or perhaps through Syria.

2. As regards the Egyptians, it is to be observed that the early statues at Boulak, like the heads from a tomb of the 6th dynasty, represent a very different type from that of the time of Rameses II; the nose is straight, the features generally less marked, and there is no beard. But this might be due to increased care in drawing.

If the reader compares this earlier type¹ with the heads of the Cappadocian deities,² or with the round-headed beardless type found at Tell Loh, he cannot fail to be struck with the resemblance. The later aquiline type is that presented by the mummy of Thotmes III (which I saw in 1882) and of Rameses III. It resembles the Abyssinian finest

and projecting cheekbones. The Greek, the Jew, the Persian, the Copt, the Abyssinian, the Circassian, the Georgian, the Armenian, and the Negro may also be studied in Palestine. In South Africa I have studied the Bantu (Bechuana, Basuto, and Zulu), the Hottentot, and the Bushman. In Turkey I was much struck with the Mongolian appearance of the peasantry. In Egypt I found the Fellah to be quite different to the Syrian peasant, and hardly Semitic at all. The Copt, the pure Arab, the Berberi, and Nubian I have also observed in Egypt. The type of the Red Indians who visited England struck me as very different from what I had expected, the figures being so very thick-set and the cheekbones very broad. There is a certain affinity to the Aztec and the Red Indian in the Hittite and in some Etruscan types, which is very curious. Dr. Taylor, in 1872, classed some at least of the American languages in the Turanian family.

¹ The Cushite stock—if the Tell Loh pictures are correctly described—must have been darker than the Semitic, approaching black. The “race (or blood) dark” of the Akkadian is rendered *Adamatu* “red” in the Assyrian. The dark ruddy colour of the Palestine Fellahin is at once recalled, and this might be the complexion of the Egyptians—very different from the greyer colour of the pure Arab. The modern Egyptian Fellah, like the Copt, has probably much Turanian blood in his veins. The later Egyptian language approaches in structure more closely to Turanian syntax than does the earliest Egyptian dialect.

² Investigating the Carian words which have survived, I find them to be all apparently Turanian, and some Scythian words given by Herodotus seem to have the same origin. The Carians were akin to the Cappadocians and Hittites, who were also Turanian.

type, and the dressing of the hair (see the great wig in the British Museum) recalls that of the non-Arab tribes of the Soudan.

3. The Semitic type is very clearly marked by the aquiline features, the beard, and generally by the head-dress, resembling the modern Kufeyeh. The side curls, plaited and often very long, which occur on these photographs, were worn by the Phœnicians, and are still worn by the Bedouin.

4. Both the Rutennu and the Hittites present a Mongolian type, with brown or orange complexion, sometimes reddish. Generally, but not always, they are beardless. The hair appears to be dark, when coloured at all. The Rutennu, in some cases, are more Mongolian than the Kheta, whose noses are often aquiline. The receding forehead and chin and aquiline nose occur, however, among the modern Kirghiz. The general type is not unlike the extremely exaggerated Etruscan type, with a big long nose, high cheekbones, and very slanting eyes, with black hair and receding forehead. The pigtail of the Kheta is not known in Etruria. The heads on Hittite monuments (such as J., I and III) approach the Egyptian representation of some of the Kheta. The Kheta chiefs were perhaps not pure Mongols, but had Semitic blood in their veins; but the head of a modern Kirghiz is as like the Hittite type as it is possible to conceive. The Kirghiz are a mixed Turko-Mongolian race, speaking a Turkic language. The bearded big-nosed heads at Ibreez are illustrated by a bearded Kheta chief on these monuments. In Chakdea, also, we have bearded non-Semitic portraits,¹ and bearded figures occur also in Etruria.

The two races of the cuneiform documents were perhaps the Northern Aryo-Turanian and the Southern Egypto-Semitic. The new monuments appear to connect Kush with the Egyptians (as does the Bible). The division agrees with the present scientific view as to the relationship of Aryan and Turanian, Semitic and Egyptian languages, but the early home of the southern race is still doubtful.

¹ The Bible connects the Canaanites and the Philistines with the Egyptians and the Cushites; and the Hyksos, the Kheta, and the later Egyptian facial types are not far apart, but the Egyptian and Kheta languages are very distinct. Although race does not of necessity involve language, it seems to me that the distinction has of late been exaggerated. It must be to a somewhat late period that a change of language in any race is to be attributed, otherwise language would not develop at all. The approximation of Kheta and Egyptian types may be due to the infusion of Semitic blood in both. It seems that the division in Genesis x is geographical rather than ethnic, belonging to an age when it was already impossible to distinguish race very clearly, since the migrations of the various stocks had been going on for many centuries, and mixed breeds of all kinds already existed. There were, however, most Semites in the south-east or east, most Aryans in the north, while Ham ("the south") included the Turanian Canaanites and the Asiatic Egyptians. The Egyptian language shows how very early Turanians reached Egypt, importing 150 Turanian words into a distinct language which is nearer in structure to the Semitic. By 2000 B.C. also a large Semitic element had found its way to the Delta.

It may be regarded as fairly certain that the Turanians came from the region south of the Caucasus and perhaps from further east, and the Aryans perhaps divided off, and had their home in the valleys of the Volga, and the Don; the southern race perhaps belonged originally to the Mesopotamian valley. As to the European origin of the Aryans, the evidence is not strong, and the subject has not been worked out to its full bearings. Scholars have argued for a Semitic race in Chaldea preceding the Akkadians, and there are no river-valleys in Arabia to form their home. Either they reached Arabia from the Nile in Africa, or they spread south from the Euphrates, which appears most probable, since the true Egyptian type has been long since pronounced to be Caucasian, and is very different from the Negro, the Nubian, or even from the type of the people of Pun, which is nearer perhaps to the Bantu.

The identification of the names of some of the tribes represented at Karnak is tolerably certain, including Amorites, Hittites, the Shasu, or nomadic Arabs, the Derdeni, or Dardanians (a bearded people), the Rutennu, or Canaanites, and the inhabitants of Ascalon and Damascus. Others, such as the supposed Etruscans, Cicilians, Sardinians, and Tencrians, are, to say the least, doubtful. If the Pulistha be correctly identified as Philistines, it is interesting to note that their headdress is the same worn by the Takrui, or supposed Teucrians. Their appearance is non-Semitic, and perhaps Turanian. This would seem to agree with Hitzig's theory that the Philistines were akin to the Pelasgi, or pre-Aryan race of Greece, and the Philistine names in the Bible often appear to be non-Semitic.

The peculiar helmet of the Shakalsha is found also on statues from Cyprus, and other Cyprian statues (called Phœnician) give head-dresses very like that of the Pulistha. Some of these statues are beardless, with slanting eyes.

In this connection it seems important to consider the evidence lately brought forward in support of the supposition that the Aryans were of Finnic extraction. The arguments are three:—1st. Comparison of the roots of Aryan and Finnic speech. 2nd. The fair complexion of the Aryans, supposed to indicate a northern origin. 3rd. The early existence of words in Aryan languages denoting a northern European fauna and flora. Neither of these arguments is, however, very strong. 1st. The roots in question are found also in Akkadian and in Tartar languages, as well as in Finnic and Aryan. 2nd. The fair race has preserved apparently its blue eyes and light hair, though dwelling for two or even four thousand years in North Africa. 3rd. The fauna and flora are not peculiar to Northern Europe, as has been supposed by those supporting this theory. This last point may be noticed in detail. The oak grows well in Palestine and Asia Minor. The beech is found all over the north of Asia, and the birch in Turkestan and Mongolia. Snow and ice are common in Palestine and Turkestan. The bear, the wolf, the stag (roe and fallow deer), the goose, the crane, the starling, the wasp, and the bug, all occur in Syria

and in Central Asia. The eel is very susceptible of cold, the oyster occurs in the Persian Gulf. Barley is common, wheat is scarce, in Palestine. The elk occurs in the Caucasus and in North China. The seal is found in the Caspian and in the Aral, and Lake Baikal. The salmon in Asia Minor and in the region of the Hindu Kush, as well as in Algiers. Thus the linguistic evidence on which the new theory has been based crumbles away when examined by the aid of such a work as Wallace's "Distribution of Animals," or Tristram's "Natural History of the Bible." It also appears that the horse must have been known to the early Aryans, and the home of the horse is certainly not in Finland, but in Central Asia.

The general result of such considerations seems to show how much caution is required in treating the question of the early populations of Western Asia.

C. R. C.

NOTES ON THE PLATE.

Turko-Tartar types.

- No. 1. From photograph of a Kirghiz Tartar in Schuyler's "Turkestan," vol. i, page 42.
- No. 2. Tartar boy of Tashkent, from same, vol. i, page 142.
- No. 3. Tartar elder, from same, vol. ii, page 28.
- No. 4. Samarkand Tartar, from same, vol. ii, page 107.

Canaanite.

- No. 5. Hittite from Karnak monument, cast by Mr. Flinders Petrie (compare No. 1).
- No. 6. Rutennu, from the same.
- No. 7. Syrian, bearded, from the same (compare No. 3).
- No. 8. Syrian, from the same.

Asia Minor and Syria.

- No. 9. From Hittite text, J., I (compare the cap with Nos. 2 and 3) : the pigtail is curled up.
- No. 10. Beardless God at Pterium. From Perrot (vol. iv, page 639, "Histoire de l'Art").
- No. 11. King from Ibreez, perhaps Semitic, but with a Hittite text (Sketch by Davis), same publication, page 725.
- No. 12. Rutennu, from cast by Mr. Flinders Petrie (compare with 2, 4, 9, 10).

Akkadian.

- No. 13. Head of a statue from Tell Loh, from photograph in de Sarzec's "Découvertes en Chaldée;" found with Akkadian texts.

TURANIAN TYPES.



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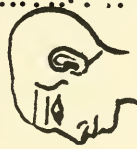
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- No. 14. Same source (compare the cap with No. 1).
 No. 15. Bronze figure, same source, bearded, but with non-Semitic features (compare No. 3).
 No. 16. Same source (compare Nos. 1 and 5).

Western.

- No. 17. Etruscan, after a sketch by Dr. Isaac Taylor.
 No. 18. From Cyprus, supposed to be Phœnician (from Perrot's "Hist. de l'Art," vol. iii).
 No. 19. From Cyprus (same source), perhaps female. This type with slanting eyes and long nose is also found on Etruscan monuments.
 No. 20. Cyprian (same source).

Southern.

- No. 21. Pulestha (Philistine?), from Karnak monument. Cast by Mr. Flinders Petrie.
 No. 22. Takrui (Teucrian?), same source, showing same head-dress.
 No. 23. Ascalon, a male captive, from cast by Mr. Flinders Petrie.
 No. 24. Early Egyptian type (same source).

There are many other similar heads in the various collections from Egypt, Cyprus, Asia Minor, Chaldea, and Etruria, giving the round-headed beardless types, with broad cheekbones and eyes sometimes slanting as on this specimen plate.

NOTES ON CALVARY.

IN a pamphlet published in 1886 at Jerusalem, and in a recent letter to the "Sunday School Times" in America, Dr. Selah Merrill intimates that, in advocating the site at Jeremiah's Grotto as Calvary, I am appropriating discoveries of Otto Thenius in 1849, and of Fisher Howe in 1871. I have never seen the works of either writer, and do not know what they may say as to Calvary. It is very probable that this hill suggested itself to many visitors as the true site; but what I was, I believe, the first to publish was not the *theory*, but the *tradition*, connecting the site with the Jewish place of execution. Dr. Merrill mentions this tradition without giving his authority, but he fails to point out that this was the chief reason for my fixing on the site. When I was in Jerusalem in 1874-75 the site of Calvary was regarded by residents as being a knoll west of that which I suppose to be the site. Dr. Chaplin, as I have said, called my attention to the Jewish tradition, and sent Jews to see me on the subject. Our enquiries then established the site to which they referred, and, as far as I know, this was never previously brought to public notice. From what he says, Dr. Merrill is apparently afraid lest this discovery should be attributed to himself, and the present note may serve to relieve his apprehensions.

C. R. C.

THE CROCODILES IN THE NAHR EZ ZERKA.

THE only place in Palestine where—according to natives—crocodiles are found is the Zerka river, near Cæsarea. They are mentioned as corcodrils by Sir John Maundeville. The following passage from a tract of the 13th century is interesting, as perhaps founded on some fact which may account for the presence of crocodiles in this river. The salt pans mentioned are those at El Melât and elsewhere along this coast, as mentioned in the “Palestine Survey Memoirs”:—

“From Chastel Pelerin (’Athlit) one goes to Cæsarea. The city stands by the sea, where one finds on the right hand (*i.e.*, of the road) the salt pans of the Hospital of St. John, and then by the sea one finds Panperdu, a tower of St. Lazarus (*i.e.*, of the order so called). On the other side, to the left hand inland, is a church of Our Lady of the Marshes (*i.e.*, of the Zerka), and there come many folk in pilgrimage from Cæsarea and from Chastel Pelerin. In this marsh are many cocatrices—fierce beasts which were put there by a rich man of Cæsarea, and he had them fed, for he would have them devour his brother, because of a quarrel he had with him, and for this he had them brought from Egypt. And one day he brought his brother to bathe, secretly to slay him. And his brother was wiser than he, and made him go down first, and the beasts which he had fed so soon dragged him down that he might never be found, and the treason was known through those who had agreed to it, and thus was the traitor lost and his brother saved.”—(*See* “Publications de la Société de l’Orient Latin, Série Géographique III,” p. 191).

C. R. C.

NEBI DHAHY.

IN the “Memoirs” (vol. ii, p. 132) I have given the legend of the dog who buried Neby Dhahy or Duheiyeh. This may be connected with Dahya el Kelbi (the dog-like Dahya), who was one of the early converts to Islam before the Battle of the Ditch.—(*See* Rodwell’s “Koran,” p. 409.)

C. R. C.

THE “VIA MARIS.”

I HAVE read with much interest Herr Schumacher’s survey of “The Jaulan,” and shall be much obliged to any reader of the *Quarterly Statement* who will explain the ground for his identification of the *Via Maris* of antiquity with the caravan road which bisects Upper Jaulan in the direction of Akka and Haifa, as described on page 65 of the English translation of his work.

The question is of some importance in connexion with the right interpretation of Isaiah ix, 1, and S. Matthew iv, 13 to 16. Commentators are

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divided. Some take the words "Way of the Sea" to mean merely the inhabitants of the neighbourhood of the Lake; others restrict the words to the tract of land *west* of the Lake; others again seem to place "The Way of the Sea" wholly "beyond Jordan," or *east* of the Lake. Following a hint given by Lightfoot (Chorog. Cent., ch. 71), I had thought that "The Way of the Sea" might be a narrow strip or "full line" of dry land on the east coast of the Lake, belonging to Naphthali, whereon the fishers of Naphthali might "draw out their nets," for (according to Lightfoot) the Lake was wholly within the territory of Naphthali.

In the midst of all this uncertainty, it is refreshing to learn that the *Via Maris* is simply a "well-known and important commercial highway" connecting Damascus with the Mediterranean Sea; that it crosses the Upper Jordan at the Bridge of Jacob's Daughters; and that it is much frequented, though in a ruinous state, at the present day. Perhaps Josephus (Ant. v, i, 22) is merely alluding to the point at which the *Via Maris* crosses the Jordan, when his words *seem* to include the city of Damascus within the portion of Naphthali—an interpretation which Lightfoot (*l. c.*) says "would be ridiculous."

Can the identification of the *Via Maris* of Isaiah ix, 1, with Herr Schumacher's "third principal and caravan road" be substantiated? And, if so, what does the phrase mean in Kings xix, 43?

CHARLES DRUITT.

METEOROLOGICAL OBSERVATIONS.

1880.

THE numbers in column 1 of this table show the highest reading of the barometer in each month; of these, the highest appear in the winter, and the lowest in the summer months. The maximum for the year was in January, viz., 30.269. In column 2 the lowest in each month are shown; the minimum, 29.489 ins., was in April; the range of readings in the year was 0.780 inch. The numbers in the 3rd column show the range of readings in each month; the smallest is in October, being a fifth of an inch, whilst the largest is in April, being somewhat more than half an inch. The numbers in the 4th column show the mean monthly pressure of the atmosphere; the largest is in January and the smallest in July.

The highest temperatures of the air in each month are shown in column 5. The highest temperature in the year was 103° in May, but the temperature exceeded 90° in every month from April to November. The first day in the year the temperature reached 90° was on April 12th, and there were two other days in this month when the temperature was more than 90°; in May there were five days when the temperature reached and exceeded 90°; the highest, 103°, took place on the 23rd. In June there were two such days, in July six days, in August seven days, in September

nine days, the highest of which, on the sixth day, was 102° ; in October four days, and in November one day—on the 4th, when the temperature was as high as 96° , and this was the last day in the year of such a high temperature as 90° ; therefore the temperature reached and exceeded 90° on 36 days in the year.

The numbers in column 6 show the lowest temperature of the air in each month; in January it was as low as 32° on two different nights, and was below 40° on three other nights; in February it was as low as 32° on one night, and below 40° on four other nights; in March it was as low as 34° on the 17th, and below 40° on two other nights; and the temperature was not below 40° in any other month of the year: therefore the temperature at night was as low as 32° on three nights, and it was below 40° on thirteen nights in the year. The yearly range of temperature was 71° . The range of temperature in each month is shown in column 7, and these numbers vary from 25° in August to 53° in both April and May.

The mean of all the highest temperatures by day, of the lowest by night, and of the average daily ranges of temperature are shown in columns 8, 9, 10, respectively. Of the high day temperatures the lowest was in January— $58^{\circ}5$ —and the highest in July, August, and September. Of the low night temperatures, the coldest, $42^{\circ}9$, took place in January, and the warmest, 69° , was in August. The average daily range of temperature, as shown in column 10, in January— $15^{\circ}6$ —is the smallest, whilst that in December was of nearly the same value; and the largest was in May— $23^{\circ}9$.

In column 11, the mean temperature of each month, as found from observations of the maximum and minimum thermometers only. The month of lowest temperature was January, $50^{\circ}7$, and that of the highest was August, 79° . The mean temperature for the year was $66^{\circ}4$.

The numbers in columns 12 and 13 are the monthly means of a dry and wet-bulb thermometer taken daily at 9 a.m.; and in column 14 the monthly temperature of the dew point at the same hour, or that of temperature at which dew would have been deposited. The elastic force of vapour is shown in column 15, and in column 16 the water present in a cubic foot of air in January was as small as $3\frac{1}{4}$ grains, whilst in July it was as large as $9\frac{1}{4}$ grains. The numbers in column 18 show the degree of humidity, saturation being condensed as 100; the smallest number is in April, and the largest numbers are in January and September. The weight of a cubic foot of air under its pressure, temperature, and humidity at 9 a.m. is shown in column 19.

The most prevalent winds in January were S.E. and S., and the least prevalent were N. and N.W. In February the most prevalent was S.E., and the least prevalent N. and N.W. In March the most prevalent were N.E. and W., and the least prevalent N. and N.W. In April the most prevalent was S.W., and the least were N., N.E., and E. In May the most prevalent were W. and its compounds, and the least N., S.E., and S. In June, July, August, September, and October the most prevalent were the S. winds, and the least prevalent were N., E., and its compounds.

In November the most prevalent were S.E. and S.W., and the least prevalent were N., N.W.; and in December the most prevalent wind was S., and the least prevalent were N. and N.W.

The numbers in column 29 show the mean amount of cloud at 9 a.m.; the month with the smallest amount is June, and the largest March. Of the cumulus, or fine weather cloud, there were 111 instances in the year; of these there were 15 in May, 17 in June, 18 in July, and 19 in August, and but 2 only in each of the months February and December. Of the nimbus, or rain cloud, there were 58 instances in the year, of which 12 were in January, 12 in February, and 13 in December, and but 3 only from May to October. Of the cirro-cumulus there were 38 instances; of the cirrus, 41; of stratus, 10; and cirro-stratus, 5. There were 103 instances in the year of cloudless skies, of which 15 were in September, 12 in June, 12 in October, 10 in August, and 9 in May and November.

The largest fall of rain for the month was in December, 10.05 ins., of which 1.37 in. fell on the 7th, 1.24 in. on the 8th, and 1.08 in. on the 6th. The next largest falls for the month were in January, 5.32 ins., and in November, 4.95 ins., of which 2.15 ins. fell on Nov. 28th, and 1.11 in. on the 29th. No rain fell from the 2nd of May till the 18th of October, making a period of 168 consecutive days without rain.

JAMES GLAISHER.

THE PALESTINE EXPLORATION FUND.

NOTES AND NEWS.

We hear from Herr Schick that a cave has been found in Jerusalem itself at a depth of no less than 47 feet 6 inches below the surface. The discovery was made in certain excavations conducted by the Russians south-east of the Church of the Holy Sepulchre. When the cave is cleared out he will report further upon it. Additional vaults of masonry have also been found in the Muristan.

Some years ago the Russian mission acquired a piece of land near the ancient site of Jericho. In digging for a foundation, capitals, pillars, lintels, iron weapons and instruments, pottery lamps and jars, brass or bronze trays, candlesticks, rings, &c., have been found—in fact, all the indications of important buildings. The Russian Exploration Society are erecting new buildings for hospices, &c., to the north of the Russian buildings.

Herr Schumacher reports the discovery of a cave near Nazareth, which he thinks will prove of great interest in connection with Mediæval traditions.

We have also received from Herr Schumacher his detailed Report of an examination of Abîl—the Abila of the Decapolis—situated in the south bank of the Yarmûk. The Report contains a plan with numerous illustrations. It will be published next year.

The University of the South has conferred upon Major Conder, R.E., the degree of D.C.L., *Honoris Causâ*; the other honorary degrees for the year conferred on Englishmen being Prebendary Rowe, D.D., and Rev. J. A. Hewitt, D.D.

The Lists of Old and New Testament names and identifications, with the references to Josephus, are now ready. Subscribers can have copies of the latter, separate, at 1s., and of the two together, in paper cover, for 3s., and bound for 3s. 6d., by application to the office only. To the general public the price of the book is 6s.

As already announced, with the view of clearing off the MSS. which await publication, the Committee have resolved on issuing an edition, in form similar to, and uniform with, the “Survey of Western Palestine,” of the following works:—

1. Conder's "Survey of Eastern Palestine," so far as completed. The MS. is very voluminous, containing as much as will make a volume equal in size to those of the "Memoirs" in the "Survey of Western Palestine." None of it has been published; the drawings are very numerous, and of the deepest interest to the student of prehistoric monuments, as well as for the illustration of the Bible.
2. The Archæological Mission of M. Clermont-Ganneau, with the drawings of M. le Comte.
These drawings are many hundreds in number, and executed in the finest style. They figure a vast number of monuments and ruins not in the "Memoirs."
3. The Flora and Fauna of the Wâdy Arabah, by J. Chichester Hart, Esq., accompanied by many drawings of plants, &c., in the best style.

The editions will be limited to 500. The first 250 subscribers will pay seven guineas for the three volumes, with an index; subscribers to the "Survey of Western Palestine" will be privileged to have the volumes for this sum. The price will be raised, after 250 names are received, to twelve guineas. The Committee are *pledged never to let any copies be subscribed under the sum of seven guineas*. Mr. A. P. Watt, 2, Paternoster Square, is the agent.

Mr. A. P. Watt has now received a sufficient number of names to warrant the commencement of the publication of the Eastern Survey, the results of M. Clermont-Ganneau's Mission and Mr. Chichester Hart's Mission. Intending subscribers to these most important and valuable works are requested to send their names to Mr. Watt (2, Paternoster Square) without delay.

The Palestine Pilgrims' Text Society has now issued the following works:—

1. "The Holy Places visited by Antoninus Martyr."
 2. "The Pilgrimage of the Holy Paula."
 3. The Buildings of Justinian. By "Procopius."
 4. The Description of Syria. By "Mukaddasi."
 5. "The Bordeaux Pilgrim."
 6. "The Abbot Daniel."
 7. "The Crusader's Letter from Acre to England."
 8. "The Norman-French Description of the City and the Country."
Translated and annotated by Captain Conder, R.E.
 9. "The Travels of Nasir-i-Khusrau." Translated by Guy Le Strange.
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In the press, and will be issued before the end of the year:—

"Arculfus de Locis Sanctis." Translated by Rev. R. Macpherson, and annotated by Sir Charles Wilson.

The friends of the Society are earnestly requested to use the "Memoirs of Twenty-one Years' Work" as a means of showing what the work has been, and what remains to be done.

Subscribers are very earnestly asked :—(1) To pay their subscriptions early in the year—say in January. (2) To pay them direct to Coutts and Co. by a banker's order. (3) If they would rather choose their own time, to send up their subscriptions without being reminded. The Clerical Staff of the Society is small; it is most desirable not to increase it; and if these simple requests are attended to a great saving of clerical labour, postage, and stationery is effected. For instance, there are, say, 3,000 subscribers. If every one of these waits to be reminded, and has to have a receipt sent to him, the Society has to spend £25 a year additional in postage, and to write 6,000 letters, merely to ask for and to acknowledge the receipt of the subscriptions.

It has come to the knowledge of the Committee that certain book hawkers are representing themselves as agents of the Society. The Committee have to caution subscribers that they have no book hawkers in their employ, and that none of their works are sold by any itinerant agents.

The Rev. James Neil, author of "Palestine Explored," has issued a pamphlet called "Strange Scenes," in which, for one penny, he gives a series of illustrations of the Bible taken from the country itself—with forty illustrations by Mr. H. A. Harper. The publishers are Messrs. Woodford, Fawcett, & Co., Salisbury Square, E.C.

The following books are now published uniform in size and appearance :—Conder's "Tent Work;" Conder's "Heth and Moab;" Schumacher's "Across the Jordan;" "The Memoirs of Twenty-One Years' Work;" Conder's "Syrian Stone Lore;" Conder's "Altaic Inscriptions;" and Schumacher's "Jaulan." Subscribers can have the whole set, together with Hull's "Mount Seir," and Names and Places, for 32s., carriage free.

Mr. Armstrong has prepared a list of the photographs belonging to the Society, arranged alphabetically according to those Bible names which are illustrated by views. This list is now ready. Those who wish for a copy may send in their names.

The income of the Society, from June 22nd to September 17th, 1888, inclusive, was—from subscriptions and donations, £122 0s. 0d.; from all sources, £296 7s. 3d. The expenditure during the same period was £269 18s. 10d. On June 21st the balance in the Banks was £235 18s. 3d.

Subscribers who do not receive the *Quarterly Statement* regularly are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

It does not seem generally known that cases for binding the *Quarterly Statement* can be had by subscribers, on application to the office, at 1s. each.

While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them

The only authorised lecturers for the Society are—

- (1) Mr. George St. Clair, F.G.S., Member of the Anthropological Institute and of the Society of Biblical Archæology.

His subjects are :—

- (1) *The General Exploration of Palestine.*
- (2) *Jerusalem Buried and Recovered.*
- (3) *Buried Cities, Egypt and Palestine.*
- (4) *Buried Cities of Mesopotamia*, with some account of the Hittites.
- (5) *The Moabite Stone and the Pedigree of the English Alphabet.*

Address: Geo. St. Clair, Bristol Road, Birmingham, or at the Office of the Fund.

- (2) The Rev. Henry Geary, Vicar of St. Thomas's, Portman Square. His lectures are on the following subjects :—

The Survey of Western Palestine, as illustrating Bible History.
Palestine East of the Jordan.

The Jerusalem Excavations.

A Restoration of Ancient Jerusalem. Illustrated by original photographs shown as "dissolving views."

- (3) The Rev. James King, Vicar of St. Mary's, Berwick. His subjects are as follows :—

The Survey of Western Palestine.

Jerusalem.

The Hittites.

The Moabite Stone and other monuments.

- (4) The Rev. Thomas Harrison, 38, Melrose Gardens, West Kensington Park, W. His subjects are as follows :—

(1) *Research and Discovery in the Holy Land.*

(2) *In the Track of the Israelites from Egypt to Canaan.*

(3) *Bible Scenes in the Light of Modern Science.*

NARRATIVE OF A SCIENTIFIC EXPEDITION IN THE
TRANS-JORDANIC REGION IN THE SPRING OF 1886.

N.B.—*I have adopted generally, for obvious reasons of convenience, the orthography of proper names used by the P. E. F. in maps and other publications.*

THE object of the expedition, of which the following is a narrative, was the study, in the field, of the Flora of Moab, Gilead, and Haurân, with special reference to the forthcoming Flora of Syria and Palestine, and to observe and collect the birds of the same region, to be added to the collections of the Syrian Protestant College, with a view to the ultimate preparation of a work on the Ornithology of the same district. In addition to these, the prime objects of the expedition, accurate observations were made and recorded of the readings of two aneroids, one of Browning's and the other of Watson's make, with a view to settling the altitude of the places visited. The *personnel* of the expedition consisted of Dr. Thomas W. Kay, Professor of Zoölogy in the Syrian Protestant College, Mr. Daûd Salîm, B.A., an advanced medical student in the same, and the author. The time chosen was that in which the greatest number of plants are in season, some traces of those of the early spring being still found, while the summer plants are in many cases in a sufficiently forward state to enable one familiar with the botany of the country to determine them. As far as the Ghor is concerned, this journey was supplementary to a hasty one made in 1882, but not extended to the Shittim plain.

The barometers used during this journey were observed during the two months preceding at the Observatory of the Syrian Protestant College at Beirût. The mean for the whole of this period, corrected for the sea level, was 30.04 inches. At 5 p.m. of the day we left Beirût for Jaffa it was 29.99 inches. In the following notes B. will stand for Browning's and W. for Watson's barometer.¹

April 19.—As Jerusalem was to be our base of operations, we went first to Jaffa by sea, taking with us only our scientific apparatus and personal baggage, leaving the arrangement of tents, transportation, and provisions to be made at Jerusalem. We had entered upon the season of steady, fair weather, and enjoyed a very quiet sail to Jaffa, arriving early next morning.

April 20.—At 7.30 a.m. we disembarked. Barometers : B., 30.05 ; W. 29.8 ; mean, 29.92. This observation was taken exactly at the sea level.

¹ I have chosen to record both readings, as well as to give the mean, owing to the fluctuations, for which I am unable to assign a reason. It had been my intention to take also a portable mercurial barometer, but it was unfortunately broken, and could not be repaired in time. I share the opinion of M. Barbey, expressed in his "*Herborizations au Levant*," as to the unreliability of aneroids for determination of altitudes.

From Jaffa to Jerusalem we made use of one of the rough wagons belonging to the German colonists, and drove over the ill-kept road, which seems to be worse every time one passes over it. We only noted the plants which lay along our road, as we had no time to go to any distance in search of specimens. We observed in the hedges of Jaffa *Vicia sericocarpa*, *Fumaria Judaica*, *Lycium Barbarum*, *Urtica pilulifera*, and *U. membranacea*, *Acacia Farnesiana* stretching its thorny arms over the road, *Bryonia Syriaca* trailing in and out among the hedges, *Ephedra campylopoda*, *Rubus collinus*, and *Smilax aspera*, var. *Mauretanica*.

Among the plants noted on the road to the foot of the mountain, beside the commoner species of the maritime plain, we find *Silene Palestina*, *Kruberia peregrina*, *Ferula communis*, *Malcolmia pulchella*, *Cachrys goniocarpa*.

All along the road women and children were seen gathering out weeds, especially tares, from among the wheat. The men were ploughing the ground to prepare it for Sorghum. This seed differs from that of wheat and barley in not requiring rain to cause it to mature, and so may be sown late in the spring, when it will get little or no moisture save that in the soil. The grain is not only fed to camels, but ground to make bread for the peasantry. In one case we passed a single camel yoked to a plough. Sometimes a team is made of a camel and an ass, the former being attached to the shorter and the latter to the longer arm of a rude sort of a yoke.

At Bab-el-Wad, at the foot of the mountains, half-way from Jaffa to Jerusalem, we stopped to bait our horses, who require three feedings to get them to Jerusalem. There is a small hotel here, where a botanist who desires to study the flora of this region may find lodging and a frugal diet. In fact, there were two young Americans then staying there, engaged in collecting flowers for ornamental books illustrative of the flora of Palestine. There is also a miserable café by the roadside. We ordered some coffee, and, being entitled to two piastres in change, we received coppers in nominal value thirteen piastres, and in weight about half a pound. The coinage of Turkey is unknowable. The nominal unit of value is a piastre, but no one has ever seen a coin which represents this unit. It is true that there are numerous coins stamped with the name piastre and fractions of a piastre, but they differ in value in every town. One piece, nominally a piastre, is worth half a piastre in one place and a little less in another, and more in another. A twenty-piastre piece is worth nineteen in one place, twenty-three in another, twenty-six in another, but not these numbers of any actual coin, but of an ideal piastre, which has no existence. In Beirût a Turkish gold medjeedie is worth $123\frac{1}{4}$ piastres, in Jerusalem $124\frac{1}{2}$, and so on. Accurate accounts in such a state of the coinage are quite impossible. There are many coins circulating at half, or a quarter, or even an eighth, of their nominal value. The paper issues of the Government are absolutely worthless.

The way from Bab-el-Wad to Jerusalem lies at first up the valley; it

then passes over several spurs of the mountain, making in some places a considerable descent, with corresponding loss of time in regaining the lost altitude. The most common trees on the road are the terebinth, the ever-green oak, and the olive. The *Arbutus Andrachne* is one of the most conspicuous of the shrubs. There is also an abundance of *Calycotome villosa* and *Rhamnus Palæstina*. It soon grew too dark to botanize, and we did not arrive in Jerusalem until half-past ten at night, twelve hours after leaving Jaffa. Barometer: B., 27·37; W., 27·20; mean, 27·285, at level of second floor of the Mediterranean Hotel.

The birds observed during the day were *Passer domesticus*, *Merops apiaster*, *Alauda cristata*, *Carduelis elegans*, *Accipiter nisus*, *Milvus* sp., *Saxicola* sp. We also saw a few lizards.

Wednesday, April 21, 7 a.m.—Barometer: B., 27·39; W., 27·19; mean, 27·29, which indicates a height of 2,500 feet. We had received a hospitable greeting the night before from Rev. S. Merrill, D.D., then U. S. Consul at Jerusalem. We had hoped for his company during the journey, but he was unable to leave his post at that season owing to the great number of American travellers in Jerusalem. We thus lost his valuable experience of the country east of the Jordan, in the knowledge of which he is not equalled by any traveller, having spent many years in studying its archæology, geography, and natural history.

We had great difficulty in arranging for animals to carry our impedimenta and ourselves, as the horses and mules not actually on the march with travellers were all at grass. At last, however, we arranged, through Cook's agency, for the nine animals required, and for a cook, and the stores necessary for a twenty-days' tour. But as there was no hope of our getting off on that or the following day, we had time to see so much of Dr. Merrill's fine collection of bird and animal skins as was not already packed to be shipped. It is, perhaps, with the exception of that of Canon Tristram, the most complete in the world for Palestine. Among other varieties he has the skin of an otter from the Jordan and a wolverene from the wilderness of Judea; also a lizard from the Syrian Desert, about a yard long, of which a specimen (unnamed) exists in the museum of the Syrian Protestant College. The number and variety of birds' skins is very great. This collection is now at Andover, in the United States.

Thursday, April 22.—Barometer: B., 27·36; W., 27·12; mean, 27·24. The morning was filled up with arrangements for the journey. Among others, we secured the services of Sheikh Felah Nimr, and his brother, 'Ali Nimr, of the tribe of 'Adwân Arabs in Northern Moab, to conduct us as far as Ma'in on the following terms:—

1st. Three medjeedies (silver) a day during the period of our stay in the dominions of their tribe.

2nd. Should we go further to the southward, as, for example, to Callirrhœ or Kerak, four medjeedies a day.

3rd. They should have no claim to food, but would expect an occasional invitation to a meal. (This practically means that they expected to live off our table.)

4th. At the end of the journey they are to have 5 lbs. of coffee and the same quantity of sugar as a gratuity.

5th. In case of our wishing to pursue our journey into the territories of the Arabs of Gilead, Sheikh Felah agrees to make an arrangement with Sheikh Shibly of that tribe at the same rate.

To confirm our bargain, one Turkish lira was paid down on the spot, and although no contract was written Dr. Merrill assured us that all would be as verbally agreed. We merely noted down the terms as a memorandum to ourselves.

I then made the circuit of the city walls, and found a flora somewhat peculiar to such localities, as *Sisymbrium pumilum*, *Silene apetala*, *S. racemosa*, Willd., *Lepidium sativum*, *Linum Hælavæ*.

A feature of these plants is that they are more or less stunted by the thinness of the soil and the exposure to the sun. I was unable to complete the circuit of the walls as I had once before done, owing to the peculiar fanaticism of the Moslem pilgrims caused by the return of the sacred banner from Nebi Musa. The annual pilgrimage to Nebi Musa is of modern origin, and was devised by the Turkish Government as an offset to the Christian and Jewish ceremonies of Easter and Passover. For the convenience of the pilgrimage, which would have been difficult, if not impossible, had the shrine been on Nebo, where it ought to be, the story was invented that Moses fled from his impending fate on Nebo, crossed the Jordan into the wilderness of Judea, and was not overtaken by the Angel of Death until he reached the site of the present shrine. During Holy Week the peasants throng into Jerusalem from all directions, and march to the sound of drums and pipes and singing down to Nebi Musa, which is situated on a rocky ledge above the Dead Sea, about three-fourths of the way from Jerusalem to the plain. Each company of pilgrims sacrifices a lamb, and eats it with singing and dancing. The banner, furnished by the Turkish Government, which has been taken down by a squad of Turkish cavalry, is escorted back also by the motley throng of pilgrims, and as the procession files around the shoulder of the Mount of Olives, at the very spot where we may fancy the children meeting our Saviour with their hosannahs, it is greeted with salvoes of artillery, posted at St. Stephen's Gate, and the shouts of the multitudes on the hillsides overlooking the Valley of Jehoshaphat and on the walls and towers of the city. The scene has points of resemblance to the triumphal entry of our Lord which make it extremely suggestive, and is one of the most striking spectacles of Passion Week.

Late in the afternoon our riding horses were brought for trial. The Orientals are extremely unfeeling in the matter of riding and loading animals with sore backs; almost all the horses brought for trial had bad ulcers under the saddle pads. At last, after rejecting a considerable number of animals, we found some with backs which, by dint of special padding to avoid the sore places, could bear the saddle.

In the evening I had the pleasure of an introduction to Professor Lewis, of the Committee of the Palestine Exploration Fund, with whom I

had a conversation in regard to the projected journey, and also in respect to the desirability of establishing in connection with the College at Beirût a library of reference composed of works bearing on Oriental research, and a museum of Biblical archæology and natural history for the use of scholars who may wish to pursue their studies in the East.

Friday, April 23.—Barometer: B., 27·38; W., 27·16; mean, 27. No journey in the East can be begun without a controversy the first day in regard to the loads, no matter how explicit has been the bargain; the muleteers always pronounce the loads too heavy, and hope by delays at the last moment to force the traveller to take an extra animal or two. With a little firmness and patience, however, we were under way at half-past nine in the morning.

The vegetation along the road from Jerusalem to Jericho is the same as that of the table-land of Palestine until about half an hour before reaching Khan Hathrûrah, when the desert types suddenly begin to appear. The first of these plants that is met is *Statice Thonini*, then *Chenolea Arabica*, *Erodium glaucophyllum*, *Fagonia mollis* and *F. grandiflora*, *Glaucium corniculatum*. At Khan Hathrûrah the mean of the barometer was 29·04, which makes it a little below the level of the sea. This Khan, on the supposed site of the inn where the good Samaritan left the man who had fallen among thieves, had been rebuilt since my visit in 1882. A large quadrangular enclosure has been provided for the accommodation of beasts, while a substantial row of arched chambers and an open court take the place of the ruined building of former days.

The change of flora after passing the Khan is striking and almost complete. Only a few ubiquitous remain to remind one of the vegetation of the hill country and plain, which is replaced by such plants as *Zygophyllum album*, *Haplophyllum longifolium*, *Allium Hierochuntinum*, *Gypsophila Rokejeka*, *Matthiola oxyceras*, *Diploxaxis Harra*, *Centauria eryngioides*, *Pteranthus echinatus*, *Gymnocarpum fruticosum*, and *Galium Judaicum*. On arriving at the plain, *Zizyphus Spina-Christi*, *Balanites Ægyptiaca*, *Solanum coagulans*, *Boerhavia plumbaginea*, and *Loranthus Acaciæ* become the characteristic plants.

We arrived at the New Bridge at 7 p.m. Barometer: B., 31·6; W., 31·5; mean, 31·55. Our tents were pitched, and the appetising savour of our dinner was puffing out from beneath the lids of our tinned-copper cooking vessels. The flimsy trestle-work bridge, built of the wood of the Jordan valley, may last for a few years, but looks as if the slightest freshet would sweep it down the stream. Two red-legged storks were perched on the top of one of the marl hills, a little to the left of our road as we came into camp, but too far away for a shot, and it was too late to stalk them.

The birds of the day were *Passer domesticus*, *Corvus monedula*, *Turtur auritus*, *T. sp.* *Sylvia sp.*, *Saxicola leucomela*, *Alauda cristata*, *Pterocles Senegalus*, *Accipiter nisus*, *Lanius collurio*, *Falco tinnunculus*, *Neophron percnopterus*, *Gyps fulvus*, *Columba livia*, *Caccabis chukar*. We also bagged a few lizards, which have not as yet been studied.

Saturday, April 24.—Barometer, a.m.: B., 31·55; W., 31·58; mean,

31565. While the horses were being saddled, and the camp struck, I occupied the time in botanizing in the jungle along the river. *Zollkofferia mucronata*, *Bromus brachystachys* (fine specimens over a yard high), *Tamarix Jordanis*, *Glycyrrhiza glabra*, *Nitraria tridentata*, *Lolium rigidum*, *Asparagus Lownei* (specimens with spurred leaves [in the original description by Baker, founded upon the specimens in Kew Herbarium, which I have since seen, there are no spurs]), *Lolium rigidum* (annual specimens, but in full fruit), *Populus Euphratica* (now past fruiting—I obtained fine fruiting specimens the next day in Wady Nimrîn).

After some bickering between the bridge-tender and our muleteers we crossed into the plain of Shittim. The caravan turned south-eastward toward Tell el-Hammâm, while we rode a little north of east toward Nimrîn. A few hundred feet from the bridge, Dr. Kay shot a bushy-tailed rat, which has not as yet been studied.

The characteristic plants met with in crossing the plain were *Statice Thouini*, *S. spicata*, *Balanites Ægyptiaca* (Zakkûm), *Calotropis procera* ('Ushîr), *Solanum coagulans* (Fikkîs), *Zizyphus Spina-Christi* (Sidr or Nebk), the berries of which are edible, *Mesembryanthemum nodiflorum*, *Atractylis cancellata*, *Tunica Arabica*, *Matthiola oxyceras*.

We lunched at the waters of Nimrîn, and took a rest under the shade of a Nebk tree from the almost tropical heat. We then skirted the Moabite hills, and to our disappointment at the time, reached our camp at Tell-el-Hammâm, at the early hour of 3 p.m. Tell-el-Hammâm is twenty minutes distant from Tell Kefrein, in the valley of the Umm-Hadhar (pronounced by the Arabs M'Hadhar). Our tents were pitched on a hillock just above a morass formed by the water of the Umm-Hadhar, a most insalubrious site, which had been chosen by the obstinacy of our guide, Sheikh 'Ali, who always showed himself less accommodating than his brother, Felah. It had been our intention to encamp at Tell-er-Ramé, an hour further on. As the tents were already pitched, we concluded to make the best of the situation, especially as the swamp gave good promise of game and plants.

The birds of the day had been *Lanius lahtora*, *Coracias garrula*, *Coturnix communis*, *Buteo vulgaris*, *Accipiter nisus*, *Sylvia atricapilla*, *S. Rüppellii*, *Crateropus Acaciæ*, *Carduelis elegans*, *Alauda cristata*, *Ammodendron Heyi*.

We plunged into the swamp, and secured *Alcedo Smyrnenis*, *Oriolus galbula*, *Lanius Nubicus*, *L. lahtora*, *Buteo vulgaris*, *Turtur auritus*. A herd of six wild swine ran down from the opposite bank into the swamp. Presently the Arabs shot a sow, which furnished us at once with a valuable skin, and a good supply of pork.

The swamp also gave us *Asparagus stipularis*, both the type and the var. *brachyclados*, *Saccharum Ægyptiacum*, *Populus Euphratica*, *Salix* sp. (near *alba*), and at its border we found *Periploca aphylla*, not heretofore found in the Ghor, and fine specimens of *Retama Roetam* in fruit, also *Trigonella Arabica* and *Daucus Jordanicus*, *Post* (a new species).

The warm spring from which Tell-el-Hammâm takes its name, is on

the hillock opposite that on which our camp was pitched, in a south-easterly direction. It is a spring of foul, ill-smelling water, with a temperature of 100° F.; gas, which we had no means of testing, rose in bubbles from the muddy bottom. Around the pools were numerous plants of *Phelipea lutea*, and overshadowing them a thicket of *Salvadora Persica*, but differing from the type in its long linear-oblong leaves, many of them four or five inches long. Dr. Merrill argues that these were the springs visited by Herod, rather than the almost inaccessible, though more potent, springs of Callirrhoë.

In addition to the insanitary condition of our camp, we were subjected to another annoyance of a botanical character. The whole hill on which we were encamped was covered with a luxuriant crop of *Stipa tortilis*, then in full ripe fruit. The seed of this plant is about a third of an inch in length, and furnished with a needle-like point and retrorse hairs. The long awn is covered with barbed hairs, and sticks fast in the meshes of any fabric with which it comes in contact. Our clothes, bedding, tents, carpets, and wrappings became filled with these needle-like seeds, which tormented us with incessant pricks and scratches. A large part of our time was spent in the vain endeavour to get rid of this pest. Not until several days after we left this camp, and only by dint of incessant picking over of our clothes, tents, and bedding, did we finally clear them all out.

Barometer at 9 p.m. : B., 30·66 ; W., 30·7 ; mean, 30·68.

Sunday, April 25.—We spent a quiet day in camp. Barometer, 7 a.m. B., 30·8 ; W., 30·75 ; mean, 30·775. In a walk which we took in the afternoon we observed, on the hill behind our camp, abundance of *Lygai pubescens*, new for this region. The thermometer at noon stood 92° F. in the shade of our tent, but in the afternoon the heat was moderated by a cool breeze. We saw numbers of wild pigs and many birds during the day. They feed at this season on the barley, and take for dessert the berries of the Nebk. 7.30 p.m., Barometer, B., 30·63 ; W., 30·65 ; mean, 30·64.

Monday, April 26.—We were up betimes, refreshed by the needed rest of the Sabbath. Travellers and explorers lose no time by keeping the day of rest. Six a.m., Barometer, B., 30·72 ; W., 30·68 ; mean, 30·70. More wild pigs.

While the caravan was being loaded I took the accompanying sketch of the range of Jebel Neba.

The whole range bears the name of Jebel Neba. Jebel Sîâghah is its western spur. Of these peaks more anon.

Before starting I noted *Notobasis Syriaca*, *Allium Hierochuntinum*.

We started at 6.30 a.m. for Tell-er-Ramé, leaving the train to take the direct road to Ma'in. An hour of shooting and botanizing among the Sidr trees brought us to Tell-er-Ramé. The hill is one of the landmarks of the Ghor, and has on its summit two whitewashed tombs, and many graves. Excavations would probably reveal ancient ruins, as is almost always the case with these isolated truncated tells in the East. Near it

base is a series of pits for storing grain. They are from four to six feet across, and six or eight feet deep. Bits of broken pottery project from the walls of these pits quite to their bottom. It would seem that for a

GENERAL VIEW OF THE NEBO RANGE.

Jebel Siâghah. Jebel Neba. Jebel
El-Mashubiyah.



The Shittim Plain.

considerable depth the soil is full of sherds, the accumulation of many centuries of *débris* in the neighbourhood of human habitations. Our guides assured us that the grain stored in these pits is quite safe from rats and moisture. The Arabs cover the floor of the pit with cut straw (*tibn*), fill it to the level of the ground with grain, cover the grain with more straw, and then heap a mound of earth over all to a height of some feet above the surface of the soil. The wheat of all the trans-Jordanic region is stored in this way.

The road from the Ghor to 'Ayûn Mûsa is steep and stony. At the foot of Tell-er-Ramé I found *Convolvulus pilosellæfolias*, Desr., a straggler from the distant plains of Mesopotamia, also *Polypogon maritimum* and *Beta vulgaris*, var. *maritima*, all new for this inland maritime plain. Gradually as we ascended, the flora changed. At first we met with the plants of the wilderness of Judea—*Haplophyllum longifolium*, *Allium Hierochuntinum*, *Centaurea eryngioides*, *Ricinus communis*; presently, *Pimpinella eriocarpa* (with fruit resembling that of *Psammogeton*). Soon we began to discover the characteristic plants

of the western slopes of the Palestine range — *Chrysanthemum segetum*, *C. coronarium*, *Senecio vernalis*, *Scolymus Hispanicus*, *Emex spinosus*, *Aphodelus fistulosus*, *A. microcarpa*, *Urginea maritima*, *Linaria Chalepensis*, *Chenopodium murale*, *Beta vulgaris*, *Salvia Horminum*, *Rhamnus Palæstina*, *Atraphaxis spinosa*, *Erodium cicutarium*, *Geranium rotundifolium* and *G. molle*, *Cichorium Intybus*, *Hordeum murinum*, *H. bulbosum*, *Piptatherum miliaceum*, *Pistacia Terebinthus*, var. *Palæstina*, *Saccharum Ægyptiacum*, *Arundo Donax*, *Capparis spinosa*, *Calendula Ægyptiaca*, *Filago prostrata*, *Polygonum aviculare*, *Juncus maritimus*, *Scabiosa prolifera*, *S. argentea*, *Bromus scoparius*, *Nerium Oleander*, *Gundelia Tournefortii*, *Ononis antiquorum*, *O. Natrix*, *Carrichtera Vellæ*, *Rhagadiolus stellatus*, *Ballota saxatilis*, *Teucrium Polium*, *Dianthus multipunctatus*, *Convolvulus althæoides*, *Ephedra campylopoda*, *Muscari comosum*, *Diplotaxis Harra*, *Brassica Tournefortii*, *Dactylis glomerata*, *Erodium gruinum*, *Falcaria Rivini*, *Anchusa strigosa*, *Linum pubescens*, *Fumaria micrantha*, *Hymenocarpus circinnatus*, *Avena sterilis*, *Ajuga tridactylites*, *Helianthemum salicifolium*, *Scrophularia xanthoglossa*, *Pallenis spinosa*, *Asteriscus aquaticus*, *Sonchus oleraceus*, *Umbilicus horizontalis*, *Veronica Anagallis*, *Hyoscyamus aureus*, *Iris Sisyrhiuchium*, *Lanium moschatum*, *Carduus argentatus*, *Galium tricornè*, *Parietaria officinalis*, *Caucalis leptophylla*, *C. tenella*, *Poterium spinosum*, *Adonis autumnalis*, *Ornithogalum Narbonense*, *Trifolium tomentosum*, *T. stellatum*, *Silene racemosa*, *S. Atocion*, *Chaetosciadium trichospermum*, *Lagæcia cuminoides*, *Ranunculus Asiaticus*, *R. myriophyllus*, *Sedum Palæstinum*, *Linum striatum*, *Biscutella Columnæ*, *Valerianella vesicaria*, *Fumaria parviflora*, *Lathyrus Aphaca*, *Geranium lucidum*, *G. tuberosum*, *Lythrum Græfferi*. These, with many others, will serve to give a picture of the floral panorama which unrolled before us as we ascended to 'Ayûn Mûsa.

At 'Ayûn Mûsa we found wild figs almost ripe. In fact some of them were already mellow enough to be eaten.

This fact may shed light on the incident of the barren fig tree, as it was hardly too late for a late Passover season.

We arrived at the fountain at 11.30 a.m. Barometer at the level of the cave, B., 28.5; at upper cave, B., 28.45; W., 28.4; mean, 28.425.

Hanging from the roof of the cavern are splendid fronds of *Adiantum Capillus-Veneris*, and on its floor fine specimens of *Scrophularia macrophylla*, and below the cavern *S. Michoniana*.

We lunched at the southernmost of the fountains, and then started for the summit of *Jebel Sîâghah*, which stood up boldly above us. As we are making the ascent let us review the question of Moses' point of view, for the last time, of the promised land which he was not to enter.

We will assume as a fixed point of departure, what perhaps is nevertheless uncertain, that *Jebel Neba* is Mount Nebo. Sheikh Felah, our guide, who has taken most of the travellers through Moab in recent years, says that the whole mountain mass which looms up above Wady 'Ayûn

Mûsa is known by the name of Jebel Neba, as that to the south of it is known by that of Jebel el-Maslubîyah. Khurbet Siâghah is the name of the ruin which crowns the prominent shoulder of this mass which looms above 'Ayûn Mûsa, and overlooks the Shittim plain, but does not include the highest rounded summit of Nebo. Moses was in the Shittim plain when commanded to ascend Nebo, to **ראש הפסגה** the top of the hill, or the top of Pisgah, making the latter a noun proper—the hill, **κατ' ἐξοχην**. If we suppose, as is altogether probable, that he started from the neighbourhood of Tell-er-Ramé, his road would lie as ours did by 'Ayûn Musa, and up the flanks of Jebel Siâghah, to its top, and thence to the summit of Nebo (the top of the hill) where he met his fate. It is impossible to conceive that he did not continue to pause and cast back his eyes from time to time during the ascent. He would instinctively turn westward at each winding of the road, and look back over the Shittim plain where the great host was encamped; at the green poplars and willows of the Jordan banks, with the silvery water flashing in places through their dense foliage, then across to the glaring desolate rocks of the Judæan wilderness; as he rose higher and higher he would discover the green hills of Palestine. When he reached the bold headland of Siâghah he would linger to take in the wonderful foreground in which the whole host would now be visible filling the plain, the northern third of the Dead Sea, the Jordan Valley, to the cleft at the bottom of which he knew lay the Sea of Tiberias (albeit invisible from this point of view), and the whole profile of Palestine. Neither from this point, nor from the top of Nebo, which is about 350 feet higher, could he literally see the Mediterranean. The including of the great sea in the prospect must be taken in the same sense as the seeing of all the land. No mountain in Moab is high enough to enable one to see the Mediterranean over the hills of Palestine, nor to see anything but the eastern declivity of those hills and their profile against the western sky.

From Siâghah Moses would naturally go on to the *top of the hill*, about a mile away, and 350 feet higher. Here his range of vision, although losing the immediate foreground of the Ghor, and the host of Israel encamped there, would take in a more comprehensive profile of the promised land across the Jordan, and in addition the surrounding hills of Moab. Here, if Neba be Nebo, should be placed the site of his last glimpse of the land of Canaan, and of the world in which he had sinned.

The criticism which derives Pisgah from Siâghah does not find any support in the genius of the Semitic languages. All Hebrew and Arabic words contain three, or at most four, radicals. Those of Pisgah are **פסג**. Those of Siâghah are **ע = ג = י = ס = מ**. To derive **סיע** from **פסג** follows no known principle of derivation, and cannot be maintained.

Furthermore, there is a fatal scriptural objection to making the *top of*

the hill **רֹאשׁ הַפְּסֶקָה** Siâghah. Balaam (Num. xxiii, 14) ascended to this point, *i.e.*, the *top of the hill* **רֹאשׁ הַפְּסֶקָה**, and from it he saw only the outskirts of the Israelitish camp. Furthermore, it was the express object of taking him there, to prevent him from seeing the whole camp. Had his point of view been Siâghah he would have seen the whole host and not its borders only, whereas from the top of Nebo he would see only the outlying detachments, while Siâghah would hide the main body from his view. We may suppose that it was likewise the object of Jehovah in taking Moses to the top of Nebo, to spare him at the last moment the pain of seeing the host of his brethren, and so mitigate the sorrow of parting.

The attempt to derive Zoar from Siâghah falls to the ground, from philological as well as scriptural reasons. The radicals of Zoar are **צוער**, while those of Siâghah are **סיע** = **سيع**. Moreover, Siâghah is much too far off from any assignable site of Sodom to suit the narrative.

Our consideration of the walk of Moses would be incomplete, did we forget that he was quite familiar with every coign of vantage for obtaining the best view of Palestine. It must be remembered that Moses made the top of Nebo the first objective in his march into the northern Moab. The host of Israel rolled up the slope of the table-land to the crest of the highlands, and looked over into the promised land. He then addressed himself to the conquest of the country of Heshbon and Elealeh, and then pressed forward into Gilead and Haurân. Weeks, or perhaps months, were occupied in the subjugation of these extensive districts, and much time afterward in rebuilding the cities and putting everything in a posture to favour to the utmost the passage of Reuben, Gad, and the half tribe of Manasseh, across the Jordan with their brethren. During this period Moses and the leaders of the host, doubtless ascended every prominent peak from Nebo to Jebel Kuleib (spelt in the Arabic with **ق** not with **ك**), and saw in detail, over and over again, all the panorama of Palestine, and he likewise saw, from the mountains of Bashan, Lebanon and anti-Lebanon, and the Damascus plain, all of which belonged to them by inheritance, clear to the entering in of Hamath northward of Lebanon and anti-Lebanon, and had been searched out as lawful territory by the spies. In going up Nebo from the valley of the Jordan, Moses was to take a *last*, not a *first*, look, and that over scenes now become familiar to him and his people.

Our conversation has lasted longer than the ride from 'Ayûn Mûsa to Siâghah, and we are on the first of the two shoulders of which the head-land is composed. We arrived at 1.20 p.m.; barometer: B., 27.68; W., 27.65; mean, 27.665.

There are somewhat extensive ruins on this shoulder. Among them we found *Ferula communis*, and *Crambe Hispanica*.

The view from this point is indeed comprehensive and impressive. It includes the hill country of Judea, the Mount of Olives directly opposite (now crowned with a minaret), the land of Ephraim, Ebal, and Gerizim, and the hill country of Galilee. In the foreground is 'Ayûn Mûsa, the valley of the Jordan, and a considerable part of the Dead Sea. The heights of Nebo cut off all the view to the east. The ruins consist of a deep vaulted chamber, surrounded by rubble walls now fallen and shapeless; also a well with a curb stone. It may well have been one of the many high places of Baal, found all over the country. (*Cf.* Num. xxii, 41.)

We crossed over to the other shoulder of the headland, on which Lieutenant Steever had erected a stone heap as a memorial of his visit. Barometer: B., 27.66; W., 27.63; mean, 27.645. It lies south-west of the other. We found there fine specimens of *Allium Erdelii*, and *Paronychia argentea*. The view is substantially the same as that from the northern peak, but a little more extensive.

The two shoulders of Siâghah suit well the narrative of Balaam. From the northern summit of Siâghah, which is, perhaps, the high place of Baal mentioned at Num. xxii, 41, he would obtain a comprehensive view of the Israelites encamped in the plain. From the southern summit he would gain a still more comprehensive one. Both summits have ruins, which may be those of high places of Baal. Just below the top of Nebo, above Siâghah, is an undulating *wheat field*. This may be the *field of Zophîm on the top of the hill*, ראש הפסגה, and from the top of the hill he would see the outer part of the Israelites' camp and no more (*cf.* Num. xxi, 20, where Pisgah is again mentioned). The heights of Siâghah effectually hide the foreground of the plain as appears from the accompanying sketch.

After spending an hour on the peaks of Siâghah, we rode up to the *top of the hill*, crossing what may have been the field of Zophîm, and reaching the summit at 3 p.m. Barometer: B., 27.26; W., 27.28; mean, 27.27. The view from this point takes in less of the north and south of Palestine than that from Siâghah, also less of the Dead Sea, and none of the Shittim plain, but includes all the great features of Palestine even better than that from Siâghah, and also the adjacent regions of Moab. It was by moving from point to point that Moses would take in every possible impression of the landscape, never more to be seen by him.

As soon as we had passed over the summit of Nebo we were in the rolling table-land of Moab. On that side there is no mountain. Scenery, fauna, and flora suddenly changed. The ridge, which is from the side of the ghor the summit of a mountain range, is from that of Moab the brow of the table-land, only slightly elevated above the general level. Nebo, from that direction, is only one of the many waves of that rolling prairie which stretches away to the Euphrates and Tigris, and beyond them to Beloochistan.

The table-land of Moab is destitute of trees, and, with the exception of Mâdeba (Medeba), which is a Christian village, and 'Amman (Rabbath Ammon), which is a Circassian colony, has no human habitations, except

the black goats' hair tents of the Arabs. As it is for the most part devoted to grazing, the effect of the landscape is dreary and monotonous. We found *Iris Sari*, *Astragalus callichrous*, *A. Alexandrinus*, both the type and var. *elongatus*, *Barbey*, *Rhaponticum pusillum*.

SKETCH OF A PORTION OF MOSES' LAST VIEW FROM NEBO.



N.B.—The two prominent peaks in the centre are those of *Jebel Siâghah*. The white to the left of them is the head of the Dead Sea. The plain to the right is that of *Jericho*. The mountain range along the horizon is that of *Judea and Southern Samaria*. The most prominent peak, just over the left summit of *Siâghah*, is the *Mount of Olives*. The plains of *Moab* are hidden by the shoulders of *Siâghah*.

The birds of the day were *Lanius lahtora*, *L. Nubicus*, *L. auriculatus*, *Passer domesticus*, *Sylvia atricapilla*, *Accipiter nisus*, *Columba livia*, *Alauda cristata*, *Saxicola oenanthe*, *Melanocorypha calandra*, *Oriolus galbula*, *Buteo vulgaris*, *Coturnix communis*, *Ciconia alba*, *Alcedo Smyrænsis*.

At 5 p.m. we arrived at *Ma'in*, the ancient *Baal-Meon*, and encamped at a little distance from the eastern foot of the tell, by the ancient cisterns, one of which still holds water. Barometer, 6.30 p.m. : B., 27.14 ; W., 27.06 ; mean, 27.1. Nothing about the present ruins indicates high antiquity. There are, however, numerous cisterns cut in the rock, beneath the surface.

Sheikh Felah, our guide, is a man of about 50 years of age, of medium stature, with a mild countenance and gentle speech. He is the

most decided gentleman whom we met among the Arabs. He has a small box full of well-earned testimonials from the distinguished travellers whom he has conducted through Moab. As soon as we arrived at Ma'in, he rode off to arrange for our visit the next day to the hot springs at Callirrhoë. This lies within the territories of the Hamîdeh Arabs, and the 'Adwân dare not conduct a stranger into their lands.

Tuesday, April 27th, 6 a.m.—Barometer: B., 27·16; W., 27·05; mean, 27·105. Taking an early start, we soon began our descent toward the deep chasm of the Zerka Ma'in. The first part of our way lay over the rocky rolling ground of the plateau. Within an hour we passed an encampment of the Hamîdeh. It consisted of a single row of tents with the openings toward the east. The usual array of dirty children, barking dogs, and slatternly women presented themselves. They offered us milk to drink, but as we had just taken our coffee we declined.

The flora was, for the first part of the way, the same that we had encountered in coming up the mountain the previous day, but reversed in order. On arriving at the level of the sea, we began to meet the peculiar plants of the Ghor and the deserts: *Erodium hirtum*, *Linaria Hælava*, *Centaurea*, sp., growing on the hot rocks near the road. As we went further down we collected *Alcea rufescens*, *Chardinia xeranthemoides*. At the top of the last hill before arriving at the amphitheatre of Callirrhoë, we met fine specimens of *Cleomia trinervia*, then *Blepharis edulis* (not before noted here), *Reaumuria Pakestina*, *Withania somnifera* (a variety with long peduncles), then *Ochradenus baccatus*, *Helianthemum Lippii*, var. *micranthum*, *Frankenia pulverulenta*, *Moringa aptera*, with panicles of fragrant flowers, *Acacia tortilis*, *Phoenix dactylifera*, *Tamarix mannifera*, *Dæmia cordata*, with its curious twining stems, *Fagonia glutinosa*, *Pentatropis spiralis*, Forsk., growing by the side of the hot water with its sulphury-yellow flowers,¹ *Trichodesma Africanum*, *Aizoon Canariense*, *Iphionia juniperifolia*, *Tetrapogon villosus*, *Atriplex leucocladium*.

The barometers at the main spring at Callirrhoë were: B., 30·20; W., 30·28; mean, 30·24. The principal springs were partly covered with poles and branches of trees, over which the Arabs lie and spread over themselves their thick lambskin cloaks, that they may swelter in the steam bath. The temperature of the principal spring was 138° F. There were several Arabs at the spring at the time of our visit, who had come for the sake of the steam baths. One of them was a young man with Hodgkin's disease (swelling of the lymphatic glands of the neck), and others were afflicted with various diseases, principally rheumatic. They had killed a lamb just before our arrival, and were seething the flesh in sour milk (lebben). The head and intestines were immersed in the hot spring to be parboiled before being cooked in the pot.

¹ This plant would seem to be the *Crucifer* alluded to by Tristram in his "Land of Moab," as no other plant with sulphur-coloured flowers grows by the water. It is, however, an *Asclepiad*, not a *Crucifer*.

I enquired of the Arabs what they knew about these springs. One of them informed me that "Our Lord Solomon" had brought these springs out of the rock. I asked him how Solomon got here over the frightful descent over which we had just come. He informed me that there were good roads through the country in those days. How an invalid like Herod could have reached them is a mystery. There is no trace of any road better than the present one, and down it an invalid could only be brought in a palanquin.

We remained for a couple of hours in the stifling atmosphere, and then set out on our return. As we started the Arabs at the spring attempted to extort black mail. We left the Sheikh to do the talking, simply assuring them that we would pay them nothing. Orientals are best dealt with through a mediator.

Our ride down had taken four hours. The return occupied five and a half, although we stopped but little to collect on our way back. We had expected to return up the wâdy, but found that it was quite impossible to go up its bed. As a detour along the brow of the cliffs which overhang it would have been very long and fatiguing, and we had no provisions for a bivouac overnight by the way, we returned over the same road by which we had come. The climb out of the gorge was excessively fatiguing, and not until we reached the breezy plateau did we regain the elasticity which the stifling air of the valley had quite taken away. On our arrival in camp we found that one of our Arabs was going to Jerusalem early in the morning, and, tired as we were, we were glad to avail ourselves of the chance to write to our friends at home.

The birds of the day were *Ciconia alba*, *Coturnix communis*, *Caccabis chukar*, *Merops apiaster*, *Passer domesticus*, *Alauda cristata*, *Calandrella brachydactyla*, *Saxicola œnanthe*, *Lanius Nubicus*, *L. collurio*, *Corvus frugilegus*, *Milvus*, sp. *Coracias garrula*, *Ammoperdix Heyi*. Two leopards were reported by the Arabs as seen the previous day on the way to the springs.

Barometer, 8 p.m. : B. 27·15 ; W. 27·05 ; mean, 27·10.

Wednesday, April 28.—Barometer, 7 a.m. at camp : B. 27·16 ; W. 27·13 ; mean, 27·145. We went up to the top of the ruins, and found the barometer there B. 27·1 ; W. 7·03 ; mean, 27·065.

The ruins are a confused mass, consisting almost wholly of the remains of the mediæval town, with few, if any, marks of antiquity. A few of the vaulted chambers seem to be used at times as residences, or as stables for cattle.

Before leaving I botanized around the camp, but found nothing of special interest. Our train took the direct route to 'Ain Hesbân, while we struck across the plain in a direction east of north toward Madeba (Medeba). We soon encountered large tufts of *Stipa Lagascæ*, the awns of which are sometimes ten or eleven inches in length. We also met with large tufts of *Phalaris Canariensis*, also *Glaucium Aleppicum*, with large orange-coloured blossoms, *Iris Sari*, *Astragalus Alexandrinus*, var. *elongatus*, Barbey.

From a distance Medeba presents a somewhat striking appearance, but the illusion is dissipated on entering the town. Yet among blind men a one-eyed man is king. Medeba is the only inhabited village on the Moab plateau, and, although the houses are of rough stone put together without mortar, and unplastered or simply daubed with mud, yet, by contrast with the goats-hair tents of the Arabs, they are pleasing to all but Bedawîn, whom nothing can induce to live within walls. The town contains about a thousand souls, all nominal Christians of the Greek and Latin rite. The complexions of the people are many shades lighter than those of the Bedawîn, and some of the young girls are quite fair and tolerably pretty. We visited the Latin Church, a dismal enough sanctuary as compared with those of civilised countries, and yet an elevating and educating force in such a desolate land as Moab. One can understand better in such circumstances the tolerance in the Divine plan of error and partial truth, when they are antagonised with more radical error or total ignorance like that of the modern Moabite Arabs. We could not but remark what Christianity, even in its imperfect form, had done for Medeba.

The reservoirs of Medeba are on a grand scale, and well preserved. That on the south side is 110 metres in circumference, and could easily be repaired for use again. Those to the east and north are smaller, but also well preserved.

After a few purchases of chickens, eggs, and bread, we turned our faces northward toward Hesbân (Heshbon), which loomed up on a high swell of the table-land. About an hour from Medeba we came to a group of cisterns under the ground, and some subterranean vaulted chambers, one of which was quite extensive and elaborate. These ruins are known as El-Kufair-esh-Shurki. I am not aware of any biblical or classical site to which they can be referred. The vaults appear to be mediæval. We took our lunch under one of these vaults by the side of the underground chamber above alluded to. Our supply of water being exhausted, we drew a little from one of the cisterns which still holds water, but it was so muddy that we only used it to wash our hands after our lunch. On the waste soil above the vaults we found *Astragalus cruciatus*.

From El-Kufair-esh-Shurki we reached Hesbân in an hour. From the ruins of this fortress a fine view is obtained of the whole plateau of Moab and the mountain range which culminates in Jebel Husha' (Osha'). The present ruins are not of high antiquity, and it is a difficult task for the imagination to restore to the reservoir to the east of the castle the beauty which made the fishpool of Heshbon a suitable simile for the eyes of Solomon's bride.

From Heshbon we crossed the plane to El-'Al (Elealeh), a shapeless mass of ruins, at the top of which is another of the stone heaps raised by Lieutenant Steever when establishing his base line for the triangulation of Moab. We have already noted one at the top of the southern shoulder of Jebel Siâghah. Dr. Kay started a fox on the top of El-'Al, but he proved too foxy for us, and escaped among the ruins. From El-'Al we

dropped down to our camp at 'Ain Hesbân, below the crest of the plateau. As soon as we crossed the brow of the table-land we again encountered the familiar flora and rocks of the maritime slopes of the Palestine range and of Lebanon.

We found our tents pitched in a meadow by the stream which flows from 'Ain Hesbân, not at the fountain itself. The water, however, was cool and clear, and very abundant. It was delightful to hear the murmuring of a brook in such a dry and thirsty land. The plants of the day were, in addition to those noted, *Astragalus hamosus*, *Geranium tuberosum*, *Veronica Syriaca*, *V. Cymbalaria*, *Coronilla scorpioides*, *Medicago scutellata*, *Adonis Palæstina*, *Allium Neapolitanum*, *Lagurus ovatus*, *Trifolium scutatum*, *T. clypeatum*, *Mercurialis annuus*, *Scandix Pecten-Veneris*, *Salvia Verbenaca*, *Silene inflata*, *Nasturtium officinale*, *Anthemis altissima*.

The birds of the day were *Ciconia alba*, *Coturnix communis*, *Caccabis chukar*, *Passer domesticus*, *Alauda cristata*, *Calandrella brachydactyla*, *Melanocorypha calandra*, *Columba livia*, *Yunx torquilla*, *Emberiza miliaria*, *Saxicola* sp., *Milvus* sp., *Accipiter nisus*, *Corvus frugilegus*, *Passer Moabiticus*.

Barometer at our camp at 7.30 p.m. : B., 27.56 W., 27.58 ; mean, 27.57.

Thursday, April 29, 6 p.m.—Barometer : B., 27.51 ; W., 27.48 ; mean, 27.495.

During the evening and night the clouds had rolled up heavily, and a few drops of rain fell. The barometer likewise fell during the night. On arriving in camp the night before we had found Sheikh 'Ali, the brother of Sheikh Felah, who gave us rather a sulky greeting. We were not sorry to learn that he was not to accompany us the next day. He is every way inferior as a guide to his polite and good-natured brother, Felah.

The morning was still threatening, so we rolled up our plant presses in the tent carpets to protect the specimens in case of a shower. We sent on our train by the direct road to 'Ammân, while we went around by 'Arak-el-Emîr. We turned northward, and passed over a spur of the mountain to Wâdy Na'ûr. Our road lay for an hour through a beautiful park-like country, sparingly wooded with *Quercus coccifera* and *Q. Ægilops*, and the ground everywhere beset with *Poterium spinosum*. We also saw *Styrax officinale*, and a pure white-flowered form of *Anchusa strigosa*. A lark started up from under the horses' feet, flew a few paces, and alighted in the grass. I dismounted, and almost succeeded in catching it. But suddenly it rose, flew a little distance to lead me on. Dr. Kay then tried a distant shot, but did not hit it, and then the bird flew away out of our sight. Doubtless this was a ruse to protect its young.

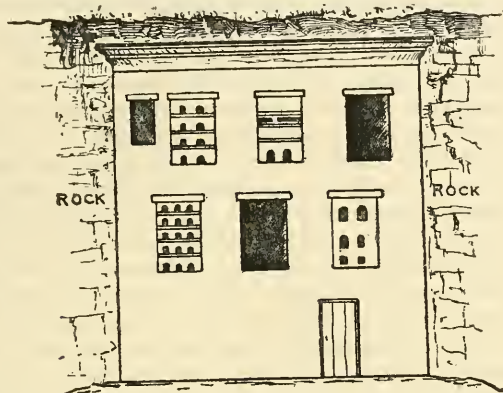
At half-past 11 we arrived at Kasr-el-'Abd, the ruin by 'Arak-el-Emîr. Barometer : B., 28.23 ; W., 28.27 ; mean, 28.25. The air was exceedingly stifling and oppressive. Among the ruins we collected *Trichodesma Boissieri*, Post, a new species with softer indument than *T. molle*, *Cerinthe major*, *Pisum*

elatius. Overpowered by the glare and heat, we were glad to leave these ruins, where the mid-day sun cast no shadow, and made our way toward Wâdy-es-Sîr. We rode up to the caverns of 'Arak-el-Emîr, or Stabl 'Antar, which are now used as cattle-pens, and the talus of manure accumulated at their base overgrown with rank specimens of *Notobasis Syriaca*, taller than a man on horseback. The cliffs above the caverns are full of turtle doves. Daûd bagged three at one shot. As we passed into the beautiful Wâdy-es-Sîr, Dr. Kay stalked and shot a jay, and presently afterward a hawk. The valley is park-like, with here and there groves of trees, *Quercus coccifera*, *Pyrus Syriaca*, *Amygdalus communis*, *Pistacia Terebinthus*, intermingled with open glades and cultivated fields. After half an hour's ride up the valley we sat down to lunch under an evergreen oak, *Qu. coccifera*, by the side of a small mill-sluice, and ate our lunch. All around were fine specimens of *Scilla hyacinthoides*, with long, spike-like racemes of blue flowers. After shooting a few birds, we rode on up the beautiful valley of Es-Sîr (Tyrus). The upper part of the valley is well wooded on both slopes, mostly with *Quercus coccifera*. Half-way from 'Arak-el-Emîr, to the head of the valley, high above its left flank in the face of the cliff, is a rock-hewn dove-cote, of which the accompanying sketch will serve to give an idea. The length and breadth of the façade are each about 19 feet. At the bottom is a doorway, which is supplied with a rough wooden door. Some of the windows are entirely open, and others have the original rock pierced with pigeon holes, as indicated in the drawing. The cote is three storeys high, originally with rock floors, which are now for the most part broken away, and in part replaced with rough wooden beams overlaid by brush. A rock-column of an oblong shape, 13 feet 4 inches long and 3 feet 5 inches wide, occupies the centre of the building, as indicated in the accompanying sketch of the ground plan of the second storey. In each storey were six tiers of nests chiselled out of the walls and central column, affording in all accommodation for many hundreds of birds. Being alone, and half an hour behind the party, I had not time to count the number of these nests. At the time of my visit there were no pigeons there, and as there were no persons near from whom to make inquiries, I could not ascertain whether it still served its ancient purpose or no. From the door at the lower entrance, and the existence of a sort of pen in front and traces of manure about, I suppose that the ground floor is now used as a fold for sheep, and the upper for sleeping places for the shepherds. Who excavated it, and when, I have no means of surmising. There was no inscription on the façade or on the rocks near by. This dove-cote had been noted before by Lieutenant Conder, in an unpublished manuscript, of which I have heard, but have not seen, but has not yet been figured in any publication so far as I know.

On the sloping hillside, beneath the dove-cote, in the rich soil, was a large number of *Trachelanthus* (*Cerinthopsis*) *pereana* of Paine, which seems to me not to differ specifically from the specimens of *T. Kurdica* in Boissier's herbarium. The single very imperfect specimen of the

latter plant in Kew herbarium differs somewhat from Paine's plant, but is too fragmentary to exhibit the specific characteristics. A little further up the valley I collected, on a shady bank, fine specimens of *Ajuga*

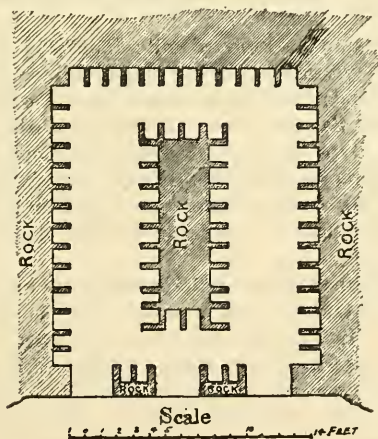
FACADE OF ROCK-HEWN DOVE-COTE IN WÂDY-ES-SÎR.



The lower cut represents the ground plan of the second storey of the same, showing the arrangement of the niches for nests. The central column is of the original rock, left as the pillars in mines to support the roof, and utilised to increase the capacity of the cote.

The upper floor is similar to the middle. The lower is also similar but has no windows.

The wooden door is quite modern.



Orientalis, with large rounded bracts. Further on, large specimens of *Cyperus longus*, and more *Trachelanthus Kurdica*.

Near the head of Wady-es-Sir is a new village of Circassian refugees, laid out with regular streets, neat little cottages, and an air of thrift quite anomalous in this land.

From the romantic scenery of Wady-es-Sir to the bleak plain of Moab, at its head, is a sudden and not agreeable transition. The dreary rolling upland, with no trees, and no relief to the eye but the numerous black goats'-hair tents, wears a featureless aspect, which was the more tiresome to us, as we were no longer rewarded with new and interesting plants, and in fact added nothing to our presses or our game bag. We were very glad when, at about 5 p.m., we arrived at 'Ammân. We found, however, to our disappointment, that our muleteers had pitched on a marshy plain by the great spring of the Zerka, which here bubbles out of the gravel, and flows in a broad sparkling stream through the town. As the camp at this place, beside its unhealthy situation, is half a mile from the ruins, and cut off from a view of them by a sharp turn in the valley, we made up our minds to move the tents to the brow of the hill south of the town, which commands a panoramic view of the ruins and the surrounding hills. While awaiting the re-establishment of our camp Dr. Kay shot a rock owl, which tried to escape by dropping into a cavity among the ruins. A Circassian boy crawled down into the crevice and fished him out with a hooked stick. It was 9 o'clock before we were settled in our camp, and our dinner was of the scantiest, but we were amply repaid for the drawbacks of our removal by the fine outlook over the town. The new Circassian village built among, and in part over, the ruins greatly mars their picturesque appearance, and as it has also been built at the expense of the materials furnished by the ancient buildings, it has largely contributed to their degradation. A generation or two of Circassian occupation will probably complete the destruction of Rabbath Ammon.

Barometer at camp on brow of hill : B., 27.05 ; W., 27 ; mean, 27. The birds of the day were *Corvus monedula*, *Lanius auriculatus*, *L. Nubicus*, *Garrulus glandarius*, *Upupa Epops*, *Corvus cornix*, *C. frugilegus*, *Actites hypoleucos*, *Saxicola oenanthe*, *Turtur auritus*, *Columba livia*, *Alauda cristata*, *Gyps fulvus*, *Neophron percnopterus*, *Milvus*, sp., *Accipiter nisus*, *Merops apiaster*, *Ceryle rudis*, *Fringilla*, sp.

Friday, April 30, Camp.—Barometer : B., 27.2 ; W., 27.15 ; mean, 27.175. At top of modern Circassian village : B., 27.33 ; W., 27.33 ; mean, 27.33.

The great abundance of fish in the stream only half a mile below the spring in which it takes its origin, suggests the idea of a subterranean spawning ground. In the morning, before we started, two boys brought between them three strings, with about a hundred fish, to sell. Unfortunately we had no arrangements to preserve them, and carried away no specimens. The source of supply must be a very abundant one to allow of such a catch at one time. In point of fact the whole stream is alive with them.

After an hour spent in examining the ruins in detail, we started

westward across the dreary plain toward Es-Salt. *Salvia acetabulosa*, *Orchis tridentata*, *O. saccata*, *Fumana glutinosa*, and a few of the roadside ubiquists, were all that we saw until we cleared the plain and began to cross the spurs at the edge of the table-land. In passing through a scrub recently cleared I found *Orchis punctulata*, var. *sepulchralis*, quite new for the Levant; the sepals and petals of the specimens found were pallid and greenish-nerved. Beyond this scrub we came upon a wooded ridge, an hour and a half south of Es-Salt. *Quercus coccifera* was the principal tree. Here I found *Limodorum abortivum*, parasitic on the roots of *Arbutus* *Andrachne* and the oaks (new for this region); also *Hesperis pendula*, *Piptatherum holciforme*, *Milium vernale*, *Arrhenatherum elatius*, *Cephalanthera ensifolia*, *Smyrniolum Olusatrum*, *Cistus villosus*, *Lonicera Etrusca*, *Ervum lenticula*, *Pinus Halepensis*, *Papaver Argemone*, *Rubia tinctoria*, *Anagyris fœtida*, *Carum ferukefolium*, *Astragalus cretaceus*. As we left the woods and passed over the naked rocky spurs we again encountered the roadside ubiquists, which accompanied us fairly within the outskirts of Es-Salt, where our tents were pitched on a shelf of rock, thinly covered with earth, under the Latin cemetery.

The birds of the day were *Passer domesticus*, *Sylvia atricapilla*, *Columba livia*, *Corvus cornix*, *C. frugilegus*, *Upupa Epops*, *Caccabis chukar*, *Melanocorypha calandra*, *Merops apiaster*, *Calandrella brachydactyla*, and *Anthus campestris*.

The savory welcome of the steam of our dinner saluted our nostrils as we passed the cook's tent. We had scarcely seated ourselves before our eyes were greeted with the welcome sight of Dr. Elias Saba, a medical graduate of the College at Beirût, who is acting as medical missionary of the Church Missionary Society at Es-Salt, where he is the associate of Pastor Jemel, the devoted incumbent of that parish. Dr. Saba, with true oriental hospitality, had brought us a lamb, a most welcome addition to our larder, which had been rather a scanty one since we had used up the last of our wild pork. He conducted us to the Turkish postal and telegraph station, where we sent a despatch to Beirût, which, however, was not delivered there until the afternoon of the following day, and the answer did not reach us until after forty-eight hours.

Es-Salt is built on both sides of a steep ravine, so that in many places the roof of one house serves as a platform in front of the one next above. Overlooking the town is a castle, now disused, and partly fallen into ruins.

Before dinner we dismissed our 'Adwân guides. A more courteous, obliging, and satisfactory guide than Sheikh Felah would be difficult to obtain.

Barometer at camp, 6 p.m. : B., 27·23 ; W., 27·2 ; mean, 27·215.

Saturday, May 1, 6 a.m.—Barometer : B., 27·27 ; W., 27·2 ; mean, 27·235. Taking an early start we went, in company with Dr. Saba, to botanize over the top of Jebel Husha' (the Arabic form of Hosea : it is not Ausha, as some have spelled it). The road winds up by an easy ascent. *Andrachne telephioides*, *Cerinth major*, *Rhus coriaria*, *Cyno-*

crambe prostrata, Marrubium cuneatum, Convolvulus Scammonia, Alys-sum campestre, Hypericum crispum, Anarrhizum orientale, and the ubiquitous. Near the top we found Onobrychis aurantiaca (immature), Astragalus Christianus, Limodorum abortivum, parasitic on Arbutus Andrachne, Sisymbrium Columnæ, Valerianella truncata, Lolium sp. At a point near the top is the wely of Nebi Husha'. Barometer: B., 26.48; W., 26.43; mean, 26.455. It is a rectangular whitewashed building, 50 × 25 feet, constructed of rubble stone, with the inevitable dome. Within it is the tomb of the prophet, 31 feet long. The Moslem tradition makes all the prophets and saints exceedingly tall, and their height increases in a direct ratio with their antiquity. The tomb, as is usually the case, was draped with green cloth in a somewhat tattered condition, and sundry rags which had been hung there by the devout. To the east of the weli is a Moslem cemetery, overshadowed by a magnificent *Quercus coccifera*.

The top of Jebel Husha' is divided into three peaks, two of which lie along its western brow, overlooking the Ghor, and the other to the north-east. From the southernmost of the western peaks (Barometer: B., 26.27; W., 26.23; mean, 26.245) is seen the finest panorama of the opposite table-land of Palestine obtainable, far finer than that from any part of Jebel Neba, including Siaghah. It takes in the heights above Hebron, the hill country of Judea, Benjamin, Ephraim, Galilee, and Hermon. From the north-eastern peak (Barometer: B., 26.22; W., 26.19; mean, 26.21) may be seen the whole circle of the Promised Land, including the trans-Jordanic region. I noted the Hauran range, Jebel 'Ajlûn, Hermon, the mountains of Galilee, Samaria (the cleft of Nablus is exactly opposite), Carmel, the hill country of Judea, Moab to Jebel Shihân, and the rolling country which forms the watershed between Moab and Gilead on the west, and the Syrian desert on the east. From this peak the Ghor and the eastern declivity of the Palestine table-land is hidden by the two western peaks. Were I seeking for a "Nebo," or "the top of a hill," over against Jericho, from the summit of which the most comprehensive as well as the most detailed view of the whole Promised Land might be obtained, I would choose Jebel Husha'. I am doubtful whether the name Neba may not be an accommodation of the Arabs to the wishes of travellers. Certainly nothing but the name entitles it to the preference over Jebel Husha' as the site of Moses' last view. The north-western peak is precisely the same height by barometer as the south-western, and gives the same view with a little of the Dead Sea cut off by the other peak, from which it may be seen to its extreme southern end.

The birds of the day were *Lanius collurio*, *Upupa Epops*, *Carduelis elegans*, *Sylvia curruca*, *S. atricapilla*, *Anthus campestris*, *Coracias garrula*, *Saxicola* sp., *Garrulus glandarius*, *Corvus* sp., *Caccabis chukar*.

6 p.m., Camp.—Barometer: B., 27.2; W., 27.16; mean, 27.18.

Sunday, May 2, Camp, 7 a.m.—Barometer: B., 27.25; W., 27.12; mean, 27.185.

Pastor Jemel has gathered about him a considerable congregation of

Protestants in that secluded town, and ministers to them in a most acceptable manner. At his request, after the morning service had been read, I preached to them in Arabic, and a more attentive and devout audience one could not wish to see. As we came out of church a telegram was handed to me; it was a reply to the one I sent to Beirût two days before. Telegrams from Es-Salt go by way of Nabulus, and if they arrive in the evening they cannot be sent until the next day.

After service a great crowd of sick and impotent folk collected in the dispensary, and we spent some hours in caring for their diseases and wounds—a practical exhibition of Christianity worth more than many sermons in the evangelisation of the world.

Pastor Jemel has given special attention to the question of the sites of Penuel and Succoth. He thinks that the former should be at El-Hârât, where there is an ancient ruin, and Succoth at El-Kheinaât, which is the Arabic for *Booths* = *Succoth*. He does not regard either Es-Salt or Gerash as Ramoth-Gilead. He was not prepared to commit himself to any theory as to the site of the latter. He thinks, however, that El-Mastabah, between Es-Salt and Gerash, is Ramoth-Mizpah, which, in his opinion, cannot be Kal'at-er-Rabadh.

In the evening we took a walk up to the castle. Barometer : B., 26·85 ; W., 26·91 ; mean, 26·88.

Monday, May 3.—Camp at Es-Salt. Barometer, 7 a.m. : B., 27·23 ; W., 27·14 ; mean, 27·185.

We secured the services of a guide to take us as far as Irbid, at the edge of Haurân. His name was 'Ophnân, which signifies *putrid*. Orientals usually give names having some signification, oftentimes a very singular one. One boy in the Lebanon was called Jidri (*Small-pox*), on account of an epidemic of that disease which prevailed at the time of his birth. While we were waiting for the mules to be loaded a crowd of people gathered around us for medical treatment, and I amused myself and my patients by doing an eye operation for one of them.

Dr. Saba rode with us to the top of the pass over Jebel Husha', where we sat for a few minutes under a large *Quercus coccifera*, and then bade good-bye to civilised society before plunging into the land of Gilead.

Our road down Jebel Husha' lay through groves of the above-mentioned oak, *Arbutus Andrachne*, and *Pinus Halepensis*. The open glades were now green with barley and wheat. Besides our ubiquitous plants, we met with *Fumana Arabica* and *F. glutinosa*, *Arum hygrophilum*, *Helicophyllum crassipes*, *Colladonia crenata*. On reaching the ford of the Jabbok, we met with *Lotus tenuifolius*, *L. lamprocarpus*, *Astragalus epiglottis*, *Typha latifolia*, and *Lythrum Græfferi*. We took a refreshing bath in the Jabbok while awaiting our convoy. This *brook* is a noisy, turbulent stream, which at this season was almost a river.

The climb up the opposite hill proved a stiff one. A little way up we met with *Andropogon hirtus*. Several times the loads were brushed off backwards in the narrow passes of the road, or were pushed away by projecting branches, and had to be untied and carried on the backs of the

muleteers beyond the obstruction. We found nothing of interest on the hillside until near its top, where we fell in with *Plantago lanceolata*, var. *altissima*, nearly 3 feet high, *Orchis sancta*, and *Polygala Monspelica*. Botanically speaking, this was the least productive day of all our journey. Just before entering the village Daūd shot a large wild cat, the only one we saw during our journey. Two gazelles were startled by the mules, but made off too quickly to be shot.

The birds of the day were *Turdus merula*, *Accipiter nisus*, *Neophron percnopterus*, *Sylvia atricapilla*, *Corvus monedula*, *Merops apiaster*, *Garrulus glandarius*, and a considerable number of small birds seen, but not shot.

We arrived in camp at Burmah at a little before sunset. Barometer : B., 28·03 ; W., 27·98 ; mean, 28·005. Our tents were pitched in a grove of olive trees, by a rivulet which carries water to the village and adjacent fields.

Tuesday, May 4.—Camp at Burmah, 6.30 a.m. B., 28·03 ; W., 27·98 ; mean, 28·005. We had passed a restless night, the air being hot and dry. We again divided our party, the mules and baggage taking the straight road to 'Ajlūn and we making a detour by Gerash. Our guide, 'Ophnān, proved ignorant of the road, and we lost our way several times. We kept nearly on a level, along the ridge which forms the left flank of the Wadi-Zerka. As we did not follow the road, we often had to force our way through rocky scrubs. We passed pomegranate bushes, *Tulipa Oculus-solis*, *Celtis Australis*, *Calystegia sepium*, *Torilis triradiata*, *Alsine decipiens*, and *Ceratonia siliqua*. After an hour we sighted the wretched village of Jejazi, a little distance below our path. It is difficult for one not accustomed to botanizing on horseback to appreciate the difficulty of collecting in the East. The restive horse, accustomed to go steadily behind his fellows from morning till night, is quite unable to comprehend why his rider should dismount every few minutes while he plucks up some insignificant weed. He tugs at the bridle, neighs at his companions, paws the ground in his impatience, and often, taking advantage of an unguarded moment, breaks away and starts off at a full gallop, leaving the botanist to follow as he may on foot, and pick up his saddle-bags or their contents strewn along the road.

Our morning's ride gave us, in addition to the afore-mentioned, *Anacamptis pyramidalis*, *Ophrys apifera*, *Silene juncea*, *Bongardia chrysogonum*.

The first view of Gerash is imposing, and the impression grows as one examines the ruins in detail. The left bank of the stream, opposite the ruins, is occupied by a flourishing Circassian village. On the aqueduct bridge I found a *Celsia heterophylla* growing between the chinks of the stones. Its nearest-known neighbours grow near 'Aintab and Marash. Dr. Kay shot a bird on top of one of the columns of the Temple of the Sun. As it fell on the edge of the capital he could only get it by sending a well-aimed rifle ball through the edge of the stone, splintering off a small fragment, which carried the bird clear over the other side of

the column. It fell minus a few feathers, and now graces the College collection ; it proved to be *Merops Ægyptiacus*.

We lunched at the great fountain. While there we received an urgent invitation from the Kaimakam to take a cup of tea with him, but, knowing the delays and ceremonies of such visits, we respectfully declined, and as soon as possible took up our line of march toward Sûf and 'Ajlûn. Soon after leaving Gerash we passed a *Viscum cruciatum*, parasitic on *Cratægus Azarolus*. Presently the wind veered around to the west, and after the parching heat of the forenoon we had a cool and refreshing breeze for the remainder of the day. Soon we found *Trifolium physodes* on a shady bank by the roadside ; then a new *Æthionema* (*Gileadense*, Post), but unfortunately only one specimen, and in a state too advanced for perfect description.

Soon we found a new *Scrophularia* of the scattered sparsely-leaved division (*S. Gileadensis*, Post), a new species well characterised by its large, almost globular flowers, and small scattered, laciniate leaves. After passing Sûf we entered a scrub similar to that of the morning, with plenty of red and white rock rose. Farther on we encountered open groves and grassy glades, in one of which we discovered *Anthriscus sylvestris*. The last hour of our ride was through romantic scenery, at one point through a pass with precipitous moss-covered rocks on either side, crowned with trees and fringed with over-hanging shrubs. From this beautiful glen we emerged rather abruptly into the clearing around the village of 'Ain-Jenneh, opposite which our camp was pitched.

The birds of the day were *Columba livia*, *Turdus merula*, *Turtur armitus*, *Buteo vulgaris*, *Coracias garrula*, *Garrulus glandarius*, *Corvus frugilegus*, *Saxicola œnanthe*, *Alauda cristata*, *Emberiza cæsia*, *Monticola cyanus*, *Lanius auriculatus*, *Corvus cornix*, *Philomela lusciniæ*.

Our camp lay in a green meadow, opposite the imposing Ka'at-er-Rabadh. Barometer : B., 27·48 ; W., 27·37 ; mean, 27·425.

Wednesday, May 5.—Camp at 'Ain-Jenneh. Barometer : B., 27·44 ; W., 27·33 ; mean, 27·385. The fall in the barometer during the night corresponded with signs of rain in the sky and air. Fearing for our collections we left the tops of our tents standing over our luggage, with strict injunctions to the muleteers not to take them down until we gave the signal from the top of the hill. We then rode up to the castle (Ka'at-er-Rabadh). Our road lay up a rocky hill, wooded with oaks. Under the trees we found *Erysimum scabrum*, new for this region, *Bellis perennis*, *Trifolium Boissieri*, and in the tank near the castle *Ranunculus aquatilis*, var. *submersus*.

The view from the top of the castle (barometer : B., 26·64 ; W., 26·50 ; mean, 26·57) includes a large part of the Dead Sea, *Jebel Husha'*, the whole of the range of Palestine, *Southern Lebanon*, Hermon, all of the Jordan valley except the portion just to the west, which is cut off by a spur of the hill. Galilee is seen with special distinctness. Haurân and Eastern Gilead are not visible from this point. The special interest of

the surrounding region centres in the life of Jephthah and the tragical end of his ill-fated daughter.

The signs of rain diminishing, we sent our guide down to start the cavalcade, but, with the idiosyncrasy of the country, the muleteers and our cook had pre-judged the case, struck the tents, and were already *en route* before we arrived at the foot of the hill. We were soon engaged again in the defile which leads out of the valley, and then turned to the left and pursued our course through a country diversified with clearings and patches of rocky woodland. The flora was in the main identical with that of the rolling uplands of Western Palestine—*Cachrys goniocarpa*, *Leccokia Cretica*, *Trifolium erubescens*, *Medicago pentacycla*, *Synelcosciadium Carmeli*, fine trees of *Juglans regia*. In a pool half-way from 'Ajlûn to Irbid, I found *Alisma natans*, not before noted in the Orient.

Just before reaching the watershed between Gilead and Haurân (barometer: B., 26.22; W., 26.15; mean, 26.185) we passed out of the woodland. This watershed was named for us by a passing Arab El-Musañjah. From this point there is a fine view of Jebel-ed-Duruz and the green plain of Haurân. We left with regret the fine park-like scenery and cool air of the uplands of Gilead and dropped gradually into the plain, and encamped late in the evening at Irbid.

The birds of the day were *Ciconia alba*, *Coracias garrula*, *Coturnix communis*, *Caccabis chukar*, *Buteo vulgaris*, *B. ferox*, *Accipiter nisus*, *Neophron percnopterus*, *Anthus campestris*, *Alanda cristata*, *Merops apiaster*, *Muscicapa grisola*, *Passer domesticus*. Two large rabbits were seen, but escaped the bag.

Irbid is a postal and telegraph station, and we enjoyed once more the opportunity of communicating with our home. Barometer on the tell overlooking the town: B., 28.03; W., 27.93; mean, 27.98.

Thursday, May 6, 7 a.m.—Barometer: B., 28; W., 27.95; mean, 27.975. There is little of botanical interest to be found around the villages of the great interior plains of Syria. Immense heaps of garbage, and the accumulated refuse of many centuries harbour nettles and goose-weeds, and a few crucifers and grasses. Having soon disposed of these, we started across the great plain toward Der'ah, the ancient Edrei. Even the ruins here are in ruin, and little is left to occupy the antiquarian. But our march across the plain began to reveal the rich and interesting vegetation of Haurân. *Astragalus oöcephalus*, with white heads as large as a hen's egg, was the most conspicuous plant of the morning. We also collected *A. cruciatus*, and *A. triradiatus*. We passed the large root-leaves of summer Umbellifers, Composites, and Scrophulariaceæ, but too little developed for collection. Six weeks later a bounteous botanical harvest could be reaped of species seldom well represented in herbaria, many of them doubtless new to science.

The caves at Der'ah were walled up, and inaccessible without more labour and time than we cared to spend in their exploration.

After lunching at the fountain, and watching our caravan file up the

opposite hill and disappear over its crest, we spent a half-hour in observing the clamour and confusion at the well. A special study of Scripture history, with reference to the incidents and customs connected with the drawing of water, would furnish material for a moderate volume. An hour now and then spent at an oriental fountain will shed a bright ray of light on these customs, and reproduce many of the incidents. Women were drawing water, men were jostling and incommoding them; there was the *beginning of strife*, and, in fact, its middle and end; there were water jars (pitchers), and buckets (skins with a metal or wooden hoop at the mouth); some of the pitchers were broken at the cistern; there were flocks, and herds, and watering-troughs; we went up and asked for water, and they let down their jars from the shoulder and gave us to drink; there were women and men *sitting* by the well.

After this instructive half-hour we set out for our camp, four hours distant. Interesting plants began to increase in number, and the birds led us many a long chase into the fields. In our ardour we wandered too far to the south, and finally reached a pool where we found fine specimens of *Butomus umbellatus*, and a number of different species of birds, which Dr. Kay and Daūd commenced to shoot. Suddenly a couple of Turkish soldiers appeared over the brow of the hill and rode towards us and asked us with some anxiety whether we had been shooting. They seemed much relieved when we told them yes, and they told us that there were roving bands of Arab robbers in this region, and that it was highly unsafe. They then directed us to the main road, which lay half-an-hour to the north. Crossing the fields we fell in with *Allium Schuberti*, with its eight to ten-inch long rays, a *Linum* near *L. Austriacum*, possibly new *Silybum Marianum*, *Onopordon Illyricum*, and *O. ambiguum*.

The birds of the day were *Ciconia alba*, *Coracias garrulus*, *Coturnix communis*, *Caccabis chukar*, *Buteo fulgens*, *B. ferox*, *Accipiter nisus*, *Nephron percnopterus*, *Anthus campestris*, *Alauda cristata*, *Merops apiaster*, *Muscicapa grisola*, *Passer domesticus*, *Corvus monedula*.

At 6 p.m. we reached our camp at Et-Tayyibah. Our course for the afternoon had lain through Wady-Zeid, except during our detour to the southward. Barometer: B., 28·06; W., 27·95; mean, 28·005.

Friday, May 7, 7 a.m.—Barometer: B., 28·08; W., 27·99; mean, 28·045. Only to-day did we fairly realise the wealth of the Haurân flora. In the morning we collected—*Linaria Damascena*, *Reseda Luteola*, *Lotus Gebelia*, *Valerianella truncata*, *V. diodon*, *Asphodeline Damascena*, *Salvia acetabulosa*, *S. moluccella*, *Lathyrus Cicera*, which is cultivated under the name of *Jilban*; and in the afternoon—*Astragalus conduplicatus*, *A. brachyceras*, *A. triradiatus*, *A. scorpioides* (new for this region), *A. Alexandrinus*, *Mericalpæa vaillantoides*, *Onobrychis Cadmea*, *Teucrium Auranticum*, *Post* (new), *Smyrniopsis cachroides*, *Cephalaria Syriaca*, var. *sessilis*, *Fritillaria Libanotica*, *Pterocephalus pulverulentus*, *Smyrnum connatum*, and a large number of other plants

heretofore unknown in this region, beside a long list of those heretofore noted, and included in the list at the end of the article.


Our course lay to the south of Wady-Zeid, and the old Roman road which runs through it.

We stopped in the middle of the day to visit the remarkable ruins of Bosrah, and to replenish our exhausted supply of bread. The most interesting object there is the church, cloister, and house of the monk Bahûrah, from whom Mohammed received so many of his ideas afterward embodied in the Koran.

The birds of the day were substantially the same as those of the day before.

Our camp for the night was pitched at a short distance from the village of Kureyah, the first of the district of Jebel-ed-Durûz. Barometer : B., 26·49 ; W., 26·43 ; mean, 26·46.

Saturday, May 8.—Camp at Kureyah, 9 a.m. Barometer : B., 26·48 ; W., 26·41 ; mean, 26·445. In the place of public assembly of Kureyah there is a portico. On one of the stones is the following inscription, in four lines :—

ΑΤΑΘΗΤΥΧΗ
ΕΚΤΙΣΘΗΗΜΛΛΝΕΕΤΟΥΣΡΡ
ΤΗΣΚΩΛΛΗΣΧ✕  ΚΠΡΟΝΟΝ
ΦΛΚΘΡΗΔΙΑΝΟΝΠΠ

We had passed a stone, evidently a tombstone, with an inscription, in the fields between Bosrah and Kureyah, the preceding day, of which the accompanying figure gives the inscription :—

ΛΛΟΜΙ
ΧΟC
ΛΛΟΜΙ
ΧΟΥ

Qurÿyah is the first of the villages of Bashan, which we had seen with stone doors and windows in a tolerable state of preservation. In most of the houses of Haurân and the Jebel-ed-Durûz the roofs are composed of slabs of basaltic stone, laid on stone lintels supported by irregular stone pillars. At Qurÿyah we discovered *Ferulago Auranitica*, Post.

We broke camp at Qurÿyah at 10 a.m., and began a leisurely march to El-Kûfr, at the base of the volcanic cone of Jebel-Kuleib. About an hour above the village we passed a mill. In the wet ground about the mill-race I found *Ranunculus Chærophyllus*, and a little farther on, in the muddy soil along the stream, the new species, *Alopecurus involucratus*, Post, which seems a connecting link between *Alopecurus* and *Cornucopiæ*. In the neighbourhood of the brook, I found abundance of *Aira capillaris* and

Melica Cupani, and a little further on, in a field, *Trifolium Alsadami*, Post. The road winds through rocky fields and shrubby places. Under a rock, shortly before reaching el-Kûfr, we met with fine specimens of *Anchusa neglecta*, and a variety of *Alkanna Orientalis*, with entire leaves. The only "oaks of Bashan" that we saw during this day were *Q. coccifera*. About el-Kûfr itself we found thickets of *Cratægus Azarolus*, *C. monogyna*, *Pistacia Terebinthus*, *Rhus Coriaria*. Growing from the rocks by the roadside were fine specimens of *Scrophularia variegata*, M. B. var. *Libanotica*. In the fields we found *Salix fragilis*, *Fumaria officinalis*, *Alyssum umbellatum*, *Lithospermum incrassatum*. The plain about el-Kûfr, at the base of the cone of Jebel Kuleib, is cut up into quadrangular enclosures by stone fences, which are generally lined by shrubbery. These copses abound in birds.

The bag of the day was *Neophron percnopterus*, *Ciconia alba*, *Lanius collurio*, *Emberiza melanocephala*, *E. miliaria*, *Linota cannabina*, *Hirundo rustica*, *Melanocorypha calandra*, *Sylvia atricapilla*, *S. orpheus*, *Hypolaïs elaïca*, *Buteo ferox*, *Oriolus galbula*, *Saxicola œnanthe*, *Saxicola* sp., *Muscicapa grisola*, *Milvus* sp., *Coturnix communis*.

We arrived at an early hour in the afternoon, and encamped in a field just outside the village, by the mountain rill which supplies it with water. The proper name of the village is el-Kûfr, which means *unbelief* or *infidelity*, but as this name is one of ill repute in the East, it is softened in ordinary usage to el-Kefr, which signifies *the village*, and is so found in the maps. An hour to the south is the village of Hebrân, which we did not visit.

The latter part of the afternoon was spent in the much-needed work of sorting our specimens and papers, writing up memoranda and labels, and packing such specimens as were sufficiently dry not to require farther attention. The barometer at 7 p.m. stood : B., 25.50 ; W., 25.43 ; mean, 25.465. A drizzling rain prevented our doing any outside work, and especially from sunning our specimens, which had not been overhauled during the week of travel.

Our camp was in full view of the cone of Jebel Kuleib, of which I made the sketch which appears on the following page.

During the night there was a high wind, but no rain. Sunday, May 9. Notwithstanding the wind of the preceding day, the morning broke clear and bright. Barometer : B., 25.49 ; W., 28.39 ; mean, 25.44. The Sheikh of the village invited us to dine with him, but we declined the invitation. Daûd Salîm, however, went to visit some of his Durûz relations at Schwat-el-Blât, a village two hours to the north-west, at the base of Jebel Kuleib. He found that they were engaged in the wedding festivities of one of the young men of his family. He gave us the following account of the feast.

After the reception and formalities of salutation, a cup of water was brought to him by an attendant, who also carried a basin, and he was told to pour the water over his right-hand as an act of ablution. A huge platter 6 feet in diameter, made of tinned copper, was then brought in,

on which was piled a mountain of boiled crushed wheat mingled with morsels of boiled meat. When this had been set in place, a dish of melted clarified butter was poured over the wheat until it was quite

SKETCH OF JEBEL KULEIB FROM EL-KUFR.



saturated. Loaves of bread in the form of cakes were placed by the side of the platter, and the guests, rolling up their sleeves, proceeded to help themselves with their fingers, and consumed the provisions, as is usual, in silence. Water and soap were then passed around to the guests, who washed off the remains of their greasy meal, after which coffee and pipes were served. It was not till rather a late hour that he rode back to camp, somewhat fatigued by the ceremonious attentions which he had received. As most of the people of el-Kúfr had gone to the reception, we were unable to assemble them for any religious services in camp.

7 p.m.—Barometer : B., 25·43 ; W., 25·35 ; mean, 25·39.

Monday, May 10th.—Barometer, 5.30 a.m. : B., 25·43 ; W., 25·43 ; mean, 25·43. On this, as on several other occasions, the behaviour of our barometers was such as to cause us to doubt the value of the aneroid for accurate determinations, either in meteorology or height of location. The morning broke windy and cloudy, and we felt many misgivings about the journey of the day, especially as to exposing our collections, which, however, we sent around by the short road to Suweidah, while we planned the long journey over Jebel Kuleib and el-Jowalil, to Konawât, and so back to Suweidah.

The first part of the ascent from el-Kúfr to Jebel Kuleib lay through stony fields, with copses of the various shrubs and trees mentioned in the narrative of yesterday. On the way up we collected *Cerastium*

anomalum, *Hypericum scabrum*, *Poterium verrucosum*, *Rosa canina*, *Glaucium Arabicum* (a species of which the range extends from Sinai to two days north of Damascus), *Hippomarathrum Boissieri*, *Prangos ferulacea*, then a fine new *Verbascum* (*Qulebicum*, Post) with cob-webby indument, and a tall stiff compound panicle, *Nepeta marrubioides*, *Muscari longipes*, *Bromus Haussknechtii*, and here and there dwarf specimens of *Pistacia Terebinthus* (var. *Palæstina*). The ascent of the cone is steep. The declivity is covered with pumice, and furnishes rather an infirm foothold for the feet of either horses or pedestrians. Half way up the main cone is a small shelf, doubtless once a side vent of the ancient volcano. It is now a low truncated cone with an inconsiderable ruin, which we did not examine, at its apex. The crater at the top is nearly filled up with scoræ and soil, and lined with a thicket of *Pistacia Terebinthus* and *Quercus coccifera*. We found at and near the top an immature species of *Dianthus* near *D. Libanotis*, *Cotoneaster nummularia*, *Bromus erectus*, and several other plants too immature for determination. The middle or end of June would be the time for the harvest at the top of Kuleib. Passing over the summit and down the northern declivity of the cone we found among the pebbles of pumice *Thalictrum isopyroides* (quite new for the Levant), *Vicia tenuifolia*, *Geranium tuberosum*, *Anthriscus nemorosa* (new for Syria), *Solenanthus amplifolius*, *Lonicera nummularifolia*. Near the base *Astragalus Bethlehemiticus*, *A. Aintabicus*, *A. deinacanthus*, *A. angustifolius*, *Allium Erdelii*, *Myosotis refracta*, *M. hispida*, *Cratægus monogyna*.

The barometer at the top of Jebel Kuleib stood : B., 24·37 ; W., 27·43 ; mean, 24·40. The morning was misty and windy, and the air at the top of Jebel Kulêb was raw and searching. The road from Kuleib to el-Jowalîl was over a plateau, with rolling volcanic hills rising confusedly on every side, nearly bare of vegetation. El-Jowalîl (Barometer, 12 a.m. : B., 24·21 ; W., 24·19 ; mean, 24·20), is naked, with the exception of a few scrubby trees, among which we noted an obtuse mucronate-leaved variety of *Pyrus Syriaca*. The peak has lost its crateriform summit, and is not picturesque or striking in any way. Arab encampments were to be seen in several of the plains between the hills, and flocks of cattle and goats were browsing on the scanty herbage. We found *Arabis auriculata*, *Alyssum Szowitsiauum*, and *Holosteum liniflorum* on the top. The wind was so strong that our horses could not face it, and we were obliged to climb rather than walk to the summit. We were glad to get down from the bleak mountain top into the valley to the north of the peak. We followed this valley down to Konawât.

The clouds, which had been threatening us all day, began to pour down rain just as we entered Konawât. We were obliged to make a hasty and unsatisfactory inspection of the magnificent ruins, and found only one botanical specimen of interest, *Melissa officinalis*. From Konawât to Suweidah we rode in a cold driving rain, and notwithstanding our india-rubber clothing, arrived drenched and chilled to the bone. Fortunately our camp had been pitched before the storm, and our bedding

and collections were dry. We encamped in a field east of the town. We had hardly entered our tent before the teacher of the village school called and politely invited us to dine. In our chilled and wearied state we felt obliged to decline his invitation. In the evening I again tried the telegraph, but with the same result as in all my previous efforts east of the Jordan. We tried in vain to wake up the operator at Damascus, and get the wire through to Beirût. I left my message to go as early as might be in the morning, hoping to receive an answer at Damascus after two days, a hope doomed to disappointment, as our message was two days in arriving. I have known one to be a week in getting from Alexandretta to Beirût.

The barometer at 8.30 p.m. in our camp stood : B., 26.35 ; W., 26.30 ; mean, 26.325.

The birds of the day were *Oriolus galbulus*, *Emberiza miliaria*, *Anthus campestris*, *Coturnix communis*, *Caccabis chukar*, *Turtur auritus*, *Ciconia alba*, *Gyps fulvus*, *Milvus* sp., *Calandrella brachydactyla*, *Alauda cristata*, *Saxicola* sp., *Hirundo rustica*.

Tuesday, May 11.—Camp at Suweidah. Barometer, 6.30 a.m. : B., 26.38 ; W., 26.33 ; mean, 26.355. The morning rose misty and cloudy, but the sun gradually dispersed the vapour, and partly dried our well-soaked tent. By 9 o'clock we were on our way. The road at first passes between two stone walls. We found at this point *Stachys Libanotica*, a variety with densely woolly calyx, and an undeveloped *Delphinium*, probably *D. orientale*, J. Gay.

After an hour we passed through the village of 'Atîl, with a ruined temple, and later through Suleim. Near the latter we collected *Nigella oxypetala*, *Ranunculus arvensis*, L., var. *rostratus*, *Lisæa Syriaca*, *Turgenia latifolia*, *Valerianella vesicaria*. Soon after leaving Suleim we began to approach the volcanic cones about Shuhba. Just before reaching the old crater to the south of the village we found on the pumice *Centaurea Trachonitica*, Post, a species near to *C. Hellenica*, but differing in the strigose indument, longer peduncles, and the pappus.

The volcanic centre, by the lava overflow of which the Leja was formed, consists of a series of craters in the neighbourhood of Shuhba. Of these three retain their crateriform shape. The southernmost, El-Gharârat-el-Kibliyah, is situated south-east of the town. The central is nearly due west. Both of these are black truncated cones, with a funnel-shaped excavation at the top, and sides at an angle of about 30°. The northernmost, Tell-Shihân, was originally a cone, but the west wall has been forced out by the great lava stream, so that it now resembles a great arm-chair, with its back toward Shuhba, and its seat toward the lava bed of the Leja, which seems to have flowed principally from this aperture. Around the crater of El-Gharârat-el-Kibliyah is a wilderness of lava crags and peaks of most grotesque and rugged forms, and almost barren of vegetation. The lonely hollows of this lava waste are the chosen home of partridges. We started a covey of them as we entered the defile which leads up to Shuhba.

The lava stream from these craters is one of the most remarkable in the world. It is of a triangular form, with the apex toward the craters, and the base toward the Jordan valley and Hermon. The sides of this triangle are about thirty miles in length. The surface is like that of a storm-tossed sea, the waves of which have been suddenly turned into stone. Even the foam of the waves is represented in the jagged crests of these grey rock billows. The surface of the Leja is everywhere fissured by transverse crevasses, in the centre of which are the places of defence and concealment which have given the district its name of *el-Leja*=*the Refuge*, and which have enabled the Druzes to defy and often to destroy the Turkish forces sent to reduce them to submission. The lava bed of the Leja is the most recent outpour, and overlies the great bed of volcanic rock which extends from northern Gilead to Aleppo.

The ruins of Shuhba are impressive, and very extensive. Among them I found a new *Nepeta* (*N. Trachonitica*, Post) with fine heads $1\frac{1}{2}$ inch in length and 1 inch in diamener, and pink flowers.

We crossed the broad shallow wâdi which separates Shuhba from Tell-Shihân. By the side of the torrent, and in its then dry bed, I found *Salvia Russelii*, a stranger not formerly observed south of Aleppo and Aintâb. The flanks of Tell-Shihân are steep, and covered with pumice. We found on the way up *Gypsophila viscosa* (*Prangos meliocarpus*, var. *Trachonitica*, Post) with pruinose leaves and large brown fruits, and at the top, near the weli, *Sisymbrium Sophia*. The view from the summit is very extensive, embracing all the Leja, the northern part of Haurân, and the southern part of the Damascus plain, and the opposite ranges of Anti-Lebanon, Hermon, and the mountains of Galilee. The range of Gilead shuts off the view to the south. Barometer at summit, B. 26.27.

After enjoying this unique view, we led our horses down the steep sides of the northern face of the cone, and a little before sunset reached our camp at Umm-ez-Zeitûn=the Mother of Olives. Barometer: B., 27.06; W., 27.03; mean, 27.045.

The birds of the day were *Milvius Ægyptiacus*, *Caccabis chukar*, *Coturnix communis*, *Saxicola* sp., *Anthus campestris*, *Accipiter nisus*, *Buteo* sp., *Oriolus galbulus*, *Ciconia alba*, *Turtur auritus*, *Hirundo rustica*, *Passer domesticus*.

Wednesday, May 12.—Camp at Umm-ez-Zeitûn, 6.30 a.m. Barometer: B., 27.13; W., 27.15; mean, 27.14.

We were annoyed in the morning by the petty thefts of the people of Umm-ez-Zeitûn, and were obliged to keep a guard over our portable property, which had not been necessary during all our previous journeys. We were told that thieving ways are quite characteristic of the inhabitants of the Leja, a peculiarity doubtless attributable to their isolated position and political immunities. The number of small articles which they appropriated during the packing of our camp furniture was considerable, and at an earlier stage of our journey would have been much more annoying.

The Leja, with the exception of a little soil formed in the crevasses by the disintegration of the softer sorts of lava, is quite barren. Hence most

of the villages are along its edge, and live by the produce of the fertile plain of older volcanic rock and soil, over which the later desolating stream has flowed. It took us seven hours to pass the eastern side of the great triangle. The villages, mostly in ruins, are all about a quarter of an hour west of the road which separates the barren lava from the wheat-fields. On the way I collected a new *Astragalus* (*A. Trachoniticus*, Post) near Sowarat-el-Kebirah, and in a wheat-field, to the right of the road near Sowarat-es-Saghîrah, *Malcolmia Auranitica*, Post, unfortunately a single and undeveloped specimen. Otherwise the day yielded nothing of special interest except *Allium Sindjarense*, and *A. Hierochuntinum*, until we reached Brak. In crossing the scorched lava beds near that place, I found a well-pronounced variety of *Thymus Syriaca*, which is described among the new plants. Professor Oliver, of Kew, prefers to regard it and *T. Syriaca*, Boiss., as varieties of *T. lanceolata*, Sm. At Brak is a large stone building, erected by the Turkish Government as barracks for the soldiers now quartered there to overawe the Druzes and Arabs of the Leja. The barometer at 8.30 p.m. was B., 27.95; W., 27.89; mean, 27.92.

The birds of the day were *Corvus monedula*, *Saxicola* sp., *Pterocles Senegalus*, *Alda cristata*, *Anthus campestris*, *Emberiza miliaria*, *Passer domesticus*, *Saxicola cenanthe*.

Thursday, May 13.—Camp at Brak, 5 a.m. Barometer: B., 27.97; W., 27.88; mean, 27.925.

While the muleteers were striking camp at an early hour in the morning, I started alone across the plain in the direction of Damascus. The air was fresh, and my jaded horse was able to gallop to the base of the hills which bound the plateau of Haurân. To the left of the road, on the flanks of Hermon, lay the rocky hills covered with *Poterium spinosum*, from the Arabic name of which the district takes its name, Aklîm-el-Billân. The look back over the table-land, before entering the chain of hills which separates it from the Damascus plain, is extensive. Beyond the green foreground of the wheat-fields of Brak lies the black, rugged, triangular lava sea of the Leja, and far away at its eastern angle the three craters from which it issued. Still more distant is the jagged range of the Jebel-ed-Durûz, with its numerous volcanic cones, ending in the striking peak of Jebel Kuleib. The plain of Haurân could be distinguished from the intervening Leja by its misty veil, which hid its greenness.

Soon after entering the range of hills, I passed a rounded headland to the left, with a single tree near its top. So striking an object as a tree in this desolate region is sure not to escape the Arabs, who have named the hill Tell-esh-Shajar (Hill of the Tree). I did not turn aside to identify it, but suppose from its shape that it must be one of the many oaks (*Qu. coccifera*), which form so striking a feature of the landscapes of Syria and Palestine.

The plants of this region are few. I found *Lepidium Aucheri* near Nedjhab. *Haplophyllum Buxbaumii* covers the stony fields with a mass of yellow waving flowers. The road, however, passes most of the way through the stony border of the plain, and not until arriving in the

irrigated gardens near Bab-Allah did I find any considerable number of plants. As it was not my object to include in this sketch the flora of Damascus, I did not stop to collect or record the numerous plants growing near the city. At 11.33, I arrived at the Victoria Hotel, where I lunched and remained until the caravan came up, in the middle of the afternoon. Barometer, 12 m. : B., 27.65; W., 27.67; mean, 27.66. Dr. Kay and myself took the night coach to Beirût, and arrived the following morning, after an absence of twenty-four days. Mr. Daûd Salim assumed charge of the caravan, which arrived safely Monday evening, the 17th, without accident or injury to the collections.

The birds of the last day between Brak and Damascus were *Emberiza melanocephala*, *E. cæsia*, *Aëdon galactodes*, *Pterocles Senegalus*, *Alauda cristata*, *Anthus campestris*, *Corvus cornix*, *Corvus* sp., *Turtur auritus*, *T.* sp., *Passer* sp.

It will be seen from the foregoing narrative that the flora of Eastern Palestine differs from that of Palestine proper, in the addition of a large number of the plants of the table-land of Damascus. The considerable number (fifteen species) of new plants, besides many new varieties of well-known species, discovered in so short a journey, encourage the hope that more comprehensive and repeated tours will add very considerably to our list of Oriental plants, as well as contribute to the definition of their range and distribution.

Of the barometric observations, a table of which is appended, I can only remark that it furnishes another illustration of the idiosyncrasies of aneroids, and the inaccuracy of this mode of determining altitudes.

TABLE OF BAROMETRIC OBSERVATIONS.

Date.	Hour.	Place.	Browning.	Watson.
April 19	5 p.m.	On boat, going to steamer (Beirût)	30.08	29.90
„ 20	7.30 a.m.	On boat, going to shore (Jaffa)	30.05	29.80
„ 20	10.30 p.m.	Second storey of Mediterranean Hotel, Jerusalem	27.37	27.20
„ 21	7 a.m.	Do. do. do.	27.39	27.19
„ 22	7 a.m.	Do. do. do.	27.36	27.12
„ 23	7 a.m.	Do. do. do.	27.38	27.16
„ 23	7.30 p.m.	New Bridge, Jordan Valley ..	31.60	31.50
„ 24	6 a.m.	Do. do. do.	31.55	31.58
„ 24	9 p.m.	Tell el Hammâm, Jordan Valley	30.66	30.70
„ 25	7 a.m.	Do. do. do.	30.80	30.75
„ 25	7.30 p.m.	Do. do. do.	30.63	30.65
„ 26	6.30 a.m.	Do. do. do.	30.72	30.68
„ 26	12 m.	'Ayûn Mûsa, at level of cave	28.50	—
„ 26	12 m.	'Ayûn Mûsa, upper fountain	28.45	28.40
„ 26	1.20 p.m.	Jebel Siâghah, ruins	27.68	27.65
„ 26	2 p.m.	Jebel Siâghah, south peak ..	27.66	27.63
„ 26	3 p.m.	Jebel Neba, highest point ..	27.26	27.28
„ 26	6.30 p.m.	Ma'in, in camp by cistern ..	27.14	27.06
„ 27	6 a.m.	Do. do. do.	27.16	27.05

Date.	Hour.	Place.	Browning.	Watson.
April 27	12 m.	Callirrhoë, chief spring ..	30·20	30·28
" 27	8 p.m.	Camp at Ma'in.. ..	27·15	27·05
" 28	7 a.m.	Do.	27·16	27·13
" 28	7.30 a.m.	Top of ruins at Ma'in.. ..	27·10	27·03
" 28	7.30 p.m.	Ain Hesbân, on the stream near the road	27·56	27·58
" 29	6 a.m.	Do. do. do. ..	27·51	27·43
" 29	11.30 a.m.	Kusr-el-'Abd	28·23	28·27
" 29	8 p.m.	Camp on hill W.S.W. of 'Ammân	27·05	27·00
" 30	7 a.m.	Do. do. do. ..	27·20	27·15
" 30	9 a.m.	At level of highest house in Ammân	27·33	27·33
" 30	6 p.m.	Camp at Es-Salt, on platform, below Latin cemetery ..	27·23	27·20
May 1	6 a.m.	Do. do. do. ..	27·27	27·20
" 1	1.30 p.m.	Height of the Wely on Jebel Husha'	26·48	26·43
" 1	3 p.m.	Height of the northern peak on Jebel Husha'	26·22	26·19
" 1	4 p.m.	Height of the southern peak on Jebel Husha'	26·27	26·22
" 1	6 p.m.	Camp at Es-Salt	27·20	27·16
" 2	7 a.m.	Do.	27·25	27·12
" 2	7 p.m.	Castle of Es-Salt	26·85	26·91
" 3	7 a.m.	Camp at Es-Salt	27·23	27·14
" 3	7.30 p.m.	Camp at Burmah	28·03	27·98
" 4	6.30 a.m.	Do.	28·03	27·98
" 4	7 p.m.	Camp at 'Ajlân	27·48	27·37
" 5	7 a.m.	Do.	27·44	27·33
" 5	8 a.m.	Top of Kal'at-er-Rabadh ..	26·64	26·50
" 5	12 m.	Height of land on road from 'Ajlân to El-Husn.. ..	26·22	26·15
" 5	9 p.m.	Camp at Irbid	28·03	27·93
" 6	7 a.m.	Do.	28·00	27·95
" 6	6.30 p.m.	Camp at Tayyibah	28·06	27·95
" 7	7 a.m.	Do.	28·08	27·90
" 7	8 p.m.	Camp at Kureiyah	26·49	26·43
" 8	9 a.m.	Do.	26·48	26·41
" 8	7 p.m.	Camp at El-Kufr	25·50	25·43
" 9	7.30 a.m.	Do.	25·49	25·39
" 9	7 p.m.	Do.	25·43	25·35
" 10	5.30 a.m.	Do.	25·43	25·43
" 10	9 a.m.	Top of Jebel-Kuleib	24·37	24·43
" 10	12 m.	Top of Jebel-el-Jowailîl ..	24·21	24·19
" 10	8.30 p.m.	In camp at Suweidah	26·35	26·30
" 11	8 a.m.	Do. do.	26·38	26·33
" 11	4 p.m.	Top of Tell Shihân	26·27	—
" 11	7 p.m.	Camp at Umm-ez-Zeitûn ..	27·06	27·03
" 12	6.30 a.m.	Do. do.	27·13	27·05
" 12	8.30 p.m.	Camp at Brak	27·95	27·89
" 13	5 a.m.	Do.	27·97	27·88
" 13	12 m.	Damascus, second storey Hotel Victoria	27·65	27·67

LIST OF PLANTS collected (or, in case of the more familiar species, observed) by the Author during a journey from April 23 to May 11, 1886, principally in Moab, Gilead, and Haurân. As the number of plants not heretofore noted in this region so largely exceeds the rest, they are not generally indicated. Plants found west of the Jordan are only mentioned if new in the region specified; new species and varieties are indicated by italics. The new species and varieties are published in the Transactions of the Linnæan Society for 1888.

I.—RANUNCULACEÆ.

1. *Clematis cirrhosa*, L. Thickets, Gilead.
2. *Thalictrum isopyroides*, C. A. M. Among pumice gravel on the northern slope of the cone of Jebel Kuleib.
3. *Adonis Palæstina*, Boiss. Plain of Sharon; table-land of Moab.
4. *Aleppica*, Boiss. Plain of Sharon.
5. *autumnalis*, L. Common in Moab, Gilead, and Haurân.
6. *æstivalis*, L. Ascent from Jordan valley to Moab, Haurân.
7. var. *squarrosa*, Boiss, Haurân.
8. *dentata*, Del., var. *subinermis*, Boiss. Haurân.
9. *Ranunculus aquatilis*, L., var. *heterophyllus*, D. C. Haurân.
10. var. *submersus*, Gr. et Godr. Gilead, Haurân.
11. *calthæfolius*, Jord. Haurân.
12. *Damascenus*, Boiss. et Gaill. Haurân.
13. *Asiaticus*, L. Moab, Gilead.
14. *Chærophyllos*, L. Haurân.
15. *myriophyllus*, Russ. Moab, Gilead, Haurân.
16. var. *Hierosolymitanus* (R. Hierosolymitanus, Boiss). Moab, Gilead.
17. *lomatocarpus*, F. and M. Everywhere.
18. *arvensis*, L., var. *rostratus*, Post. Haurân.
19. *Ceratocephalus falcatus*, Pers., var. *exscapus*, Boiss. Haurân.
20. *Nigella oxypetala*, Boiss. Between Suweidah and Shuhbah, Haurân.
21. *ciliaris*, D. C. 'Arâq-el-Emîr.
22. *Delphinium* sp., probably *Oriente*, J. Gay (immature). Suweidah, Haurân.

II.—BERBERIDACEÆ.

23. *Leontice leontopetalum*, L. Gilead, Haurân.
24. *Bongardia Chrysogonum*, L. Gilead.

III.—PAPAVERACEÆ.

25. *Papaver Rhaas*, L., var. *Syriacum*, Boiss. Moab, Gilead, Haurân. This species includes *P. stylatum*, Boiss. et Bal., *P. umbonatum*, Boiss., and *P. clavatum*, Boiss. et Haussk., and probably *P. commutatum*, F. et M., and *P. polytrichum*, Boiss. et Ky., all of which have intermediate forms connecting the series.
26. *Argemone*, L. Moab, Gilead, Haurân, Damascus.
27. *Roemeria hybrida*, L. Moab, Gilead, Haurân.
28. *Glaucium corniculatum*, L. Khan Hathrurah, between Jerusalem and Jericho.
29. *Arabicum*, Fresen. Southern slope of Jebel Kuleib ; plain of Damascus as far as Deir 'Atiyah. Heretofore only observed in Sinai.
30. *grandiflorum*, Boiss. et Huet. Haurân.
31. *Hypecöium procumbens*, L. Moab, Gilead, Haurân.
var. *grandiflorum* (H. *grandiflorum*, Benth.).
Gilead.

IV.—FUMARIACEÆ.

32. *Ceratocapnos Palestina*, Boiss. Gilead.
33. *Fumaria officinalis*, L. Fields near El-Kufr, Jebel Kuleib.
34. *micrantha*, Lag. Moab, Gilead.
35. *parviflora*, Lam. Ascent from Jordan to Moab.

V.—CRUCIFERÆ.

36. *Matthiola bicornis*, Sibth et Sm. Khan Hathrûrah, Shittim plain.
37. *oxyceras*, D. C. Shittim plain, Callirrhoë. A very variable species. Farther study will probably cause it and *M. livida*, Del., to be considered as varieties of *M. bicornis*.
38. *Nasturtium officinale*, R. Br. Wet places ; Moab, Gilead, Haurân.
39. *Arabis auriculata*, Lam. Top of Jebel-el-Jowailîl.
40. *Notoceras Canariense*, R. Br. Shittim plain ; lower slopes of Nebo.
41. *Hesperis pendula*, D. C. Woods south of Es-Salt. Prof. Paine notes *H. secundiflora*, Boiss. et Sprun, in the neighbourhood of Jebel Husha', and in the Wady-ez-Zerka. The writer, after much search, failed to find this species either in Gilead or Moab.
42. *Malcolmia Africana*, L. Plain of Damascus.
43. *Auranitica*, Post. In a wheat-field by the roadside, east of Sowarat-el-Saghîri.
44. *torulosa*, Desf. Table-land of Moab and northward.
45. var. *leiocarpa*, Boiss. Haurân.
46. *crenulata*, D. C. Haurân.

47. *Sisymbrium pumilum*, Steph. Wall of Jerusalem near Tower of David ; Haurân.
48. Sophia, L. Haurân ; top of Tell Shihân, Wady-el-Karn, Anti-Lebanon.
49. Irio, L. Moab, Jordan valley.
50. Columnæ, Jacq. Gilead, Haurân, Wady-el-Karn.
51. *Erysimoides*, Desf. At the bottom of the descent from Jerusalem to Jericho, at the edge of the plain.
52. *Damascenum*, Boiss. et Gaill. Wady-el-Karn.
53. *officinale*, L. Everywhere.
54. *runcinatum*, Lag. Haurân.
55. *Erysimum repandum*, L. Moab, Gilead.
56. var. *rigidum*, Boiss. Moab, Gilead, Haurân.
57. *scabrum*, D. C. Ka'at-er-Rabadh, Gilead.
58. *crassipes*, C. A. M. Mountains and table-land of Moab and Gilead.
59. *Brassica Tournefortii*, Gou. Flanks of Nebo, Moab.
60. *adpressa*, Moench (*Hirschfeldia adpressa*, Moench in Boiss. Fl. Or. I. 390). Common throughout.
61. *Sinapis arvensis*, L. Moab, Gilead.
62. var. *Orientalis*, Boiss. Haurân.
63. *alba*, L. Moab, Gilead, Haurân.
64. *Diplotaxis viminea*, L., var. *foliosa*, Post. Plain of Sharon.
65. var. *integrifolia*, Boiss. Khan Hathrûrah.
66. Harra, Forsk. Khan Hathrûrah, and thence to Jordan plain. In all the hot wadies opening into valley of Jordan and Dead Sea.
67. var. *glabra*, Post. Wady-el-Karn.
68. *erucoides*, L. Moab, Gilead, Haurân.
69. *Eruca sativa*, L. Moab, Gilead, Haurân. This species has, in Syria and Palestine, light-yellow lilac-veined petals. E. Cappadocica, Boiss., would seem, then, to be a variety with somewhat longer pods and larger seeds. The foliage of *E. sativa* varies, as does that of many crucifers.
70. *Carrichtera Vellæ*, D. C. Jabbok valley ; flanks of Nebo ; valleys on both sides of Dead Sea and Jordan.
71. *Fibigia clypeata*, L., var. *eriocarpa* (*F. eriocarpa*, D. C.). Jebel Husha'.
72. *Alyssum umbellatum*, Desv. Roadside in El-Kûfr.
73. Szowitsianum, F. et M. Jebel-el-Jawailîl.
74. *campestre*, L. *genuinum*, Boiss. Gilead, Haurân.
75. *aureum*, Fenyl. Haurân.
76. *menioides*, Boiss. Damascus plain.
77. *Capsella Bursa-Pastoris*, L. Everywhere.
78. *Lepidium sativum*, L. Walls of Jerusalem.
79. *spinescens*, D. C. Gilead, Haurân.
80. *Aucheri*. Between Nedjha and Tell-esh-Shajar, on the road between Damascus and Brak.

81. *Lepidium Draba*, L. Moab, Haurân.
82. *Chalepense*, L. Gilead. Probably a narrow fruited variety of the last.
83. *crassifolium*, W. K. Merj of Damascus.
84. *Æthionema heterocarpum*, J. Gay. Gilead.
85. *Gileadense*, Post. In a thicket by the roadside at the edge of the table-land, two hours from Es-Salt.
86. *Biscutella Columnæ*, Ten. Moab, Gilead, Haurân.
87. *Peltaria angustifolia*, D. C. Jebel Kuleib, Haurân.
88. *Clypeola jonthlaspi*, L. Gilead.
89. *Isatis Aleppica*, Scop. Moab, Gilead, Haurân.
90. *Neslia paniculata*, Desv. Moab, Gilead, Haurân.
91. *Texiera glastifolia*. Haurân, Wady-el-Karn.
92. *Calepina Corvini*, All. Ped. Moab, Gilead, Haurân.
93. *Ochthodium Ægyptiacum*, L. Moab, Gilead, Haurân.
94. *Crambe Orientalis*, L. Haurân.
95. *Hispanica*, L. Moab, Gilead.
96. *Rapistrum rugosum*, L. Moab, Gilead, Haurân.
97. *Enarthrocarpus strangulatus*, Boiss. Wady-Zerka-Ma'in.
98. *Erucaria Aleppica*, Gaertn. Moab, Gilead, Haurân.
99. *var. horizontalis*, Post. Pods horizontal. Nedjha, Damascus plain.
100. *Raphanus sativus*, L. Everywhere.

VI.—CAPPARIDEÆ.

101. *Cleome trinervia*, Fresen. On the steep hill side, going from Ma'in down to Callirrhoë.
102. *Capparis spinosa*, L. Hanging from face of cliffs and walls, common.

VII.—RESEDACEÆ.

103. *Ochradenus baccatus*, Del. Valley of Zerka-Ma'in, about Callirrhoë.
104. *Reseda alba*, L. Wady-Kelt, Moab, Haurân.
105. *lutea*, L. Moab, Gilead, Haurân.
106. *muricata*, Presl. Wady-Kelt.
107. *Luteola*, L. Haurân.

VIII.—CISTINEÆ.

108. *Cistus villosus*, L. Mountains of Moab and Gilead.
109. *salviefolius*, L. Mountains of Moab and Gilead.
110. *Helianthemum Niloticum*, L. Gilead.
111. *var. microcarpum*, Cors. Lower Jordan.
112. *salicifolium*, L. Moab, Gilead, Haurân.
113. *Ægyptiacum*, L. Jerusalem.

114. *Helianthemum Kahiricum*, Del. Wadies about Dead Sea.
 115. *var. depauperatum*, Post. Callirrhoë.
 116. *Lippii*, L. Callirrhoë.
 117. *var. micranthum*, Boiss. Callirrhoë.
 118. *vesicarium*, Boiss. Mountains of Moab.
 119. *Fumana Arabica*, L. Moab, Gilead.
 120. *glutinosa*, L. Moab, Gilead.

IX.—POLYGALEÆ.

121. *Polygala Monspelica*, L. Grassy places, Gilead.

X.—FRANKENIACEÆ.

122. *Frankenia pulverulenta*, L. Tell-el-Hammâm, Callirrhoë.

XI.—SILENEÆ.

123. *Dianthus multipunctatus*, Ser. Flanks of Nebo.
 124. *var. pruinusus*, Post. On hot rocks below Khan Hath-rûrah in Wadi-Kelt.
 125. *Auraniticus*, Post. Haurân, between Irbid and Bosrah.
 126. sp. probably *Libanotis*, Labill., but without flowers. At the top of the cone of Jebel Kuleib.
 126A. *Gypsophila Rokejeka*, Del. Hot rocks on road from Khan Hath-rûrah to Jordan plain; Haurân.
 127. *Damascena*, Boiss. Table-land of Moab.
 128. *viscosa*, Murr. Tell Shihân.
 129. *Saponaria Vaccaria*, L. Everywhere.
 130. *oxyodonta*, Boiss. Fields, Es-Salt.
 131. *Silene conoidea*, L. Nebo, Es-Salt.
 132. *macrodonta*, Boiss. Tell-er-Ramé, Nebo.
 133. *muscipula*, L. Plain of Sharon.
 134. *goniocalyx*, Boiss. 'Ajlûn.
 135. *racemosa*, Otth. Wall of Jerusalem.
 136. *apetala*, Willd. Wall of Jerusalem.
 137. *hirsuta*, Lag., *var. Sibthorpiana*, Boiss. Flanks of Nebo. This plant may be distinguished from *T. hispida*, Desf., by the fact that it has no alar flowers, that its calyx is not contracted in fruit, and the calyx teeth are obtuse.
 138. *Behen*, L. Plain of Sharon, Gilead, Moab.
 139. *Palestina*, Boiss. Plain of Sharon.
 140. *Oliveriana*, Otth. Es-Salt, el-Ghor, Plain of Moab.
 141. *bipartita*, Desf. Everywhere.
 142. *Atocion*, Murr. Moab, Gilead, Haurân.
 143. *inflata*, Sm. Everywhere.

144. *Silene longipetala*, Vent. Jebel Kuleib, Jebel Husha'.
 145. *juncea*, Sibth. Gilead.
 146. *Tunica pachygona*, F. et M., var. *scabra* (T. Arabica, Boiss). Shittim plain, between Nimrîn and Tell-el-Hammâm. This species is also found about Aintâb. The intermediate forms are such as to make *T. Arabica* an untenable species.

XII.—ALSINEÆ.

147. *Holostium liniflorum*, Stev. Flanks and top of El-Jowailîl.
 148. *Cerastium dichotomum*, L. Gilead, Haurân.
 149. *anomalum*, W. K. Jebel Kuleib.
 150. *vulgatum*, L. Moab, Gilead.
 151. *Stellaria media*, L. Everywhere.
 152. *Arenaria leptoclados*, Rchb. Gilead.
 153. *graveolens*, Schreb, var. *minuta*. Jebel 'Ajlûn.
 154. *Alsine decipiens*, Fenzl. Moab, Gilead.
 155. *Smithii*, Fenzl. Jubel Kuleib.
 156. *picta*, S. et Sm. Nebo, near ruins of Siâghah ; Haurân.
 157. *tenuifolia*, L. Common.
 158. *Spergula arvensis*, L. El-Ghor.
 159. *diandra*, Guss. El-Ghor, Wilderness of Judea.

XIII.—PARONYCHIEÆ.

160. *Herniaria cinerea*, D. C. Gilead, El-Ghor.
 161. *hemistemon*, J. Gay. Khan Hathrûrah.
 162. *Paronychia argentea*, L. Common throughout.
 163. *nivea*, D. Moab, Gilead.
 164. var. *obtusâ*, Post. Ain-Hesban to Ammân.
 165. var. *attenuata*, Post. Ain-Hesban to Ammân.
 166. *Gympocarpum fruticosum*, Pers. Wilderness of Judea.
 167. *Pteranthus echinatus*, Desf. Wilderness of Judea.

XIV.—TAMARISCINEÆ.

168. *Tamarix tetragyna*, Ehr. Damascus.
 169. *Jordanis*, Boiss. At Pilgrim's bathing place, and along the Jordan.
 170. *mannifera*, Ehr. Callirrhoë.
 171. *Reaumuria Palæstina*, Boiss. Wilderness of Judea, Callirrhoë.

XV.—HYPERICINEÆ.

172. *Hypericum scrabrum*, L. Jebel Kuleib.
 173. *crispum*, L. Jebel Husha'.

XVI.—MALVACEÆ.

- 174. *Alcea acaulis*, Cavan. Moab, Gilead, Haurân.
- 175. *setosa*, Boiss. Moab, Gilead.
- 176. *rufescens*, Boiss. On the road from Ma'in to Callirrhoë.
- 177. *Malva rotundifolia*, L. Everywhere.
- 178. *Cretica*, Cavan. Moab.
- 179. *parviflora*, L. New bridge over the Jordan.
- 180. *oxyloba*, Boiss. New bridge over the Jordan.
- 181. *sylvestris*, L. Gilead.
- 182. *var. oxyloba*, Post. Tell-er-Ramé. A specimen of this
variety is also found in Kew Herbarium.
- 183. *Malvella Sherardiana*, L. Gilead, Haurân.

XVII.—LINACEÆ.

- 184. *Linum strictum*, L. Moab, Gilead.
- 185. *nodiflorum*, L. Moab, Gilead.
- 186. *Syriacum*, Boiss. et Gaill. Moab, Gilead.
- 187. *pubescens*, Russ. Moab, Gilead.
- 188. *sp. near Austriacum*. Haurân.

XVIII.—ZYGOPHYLLÆ.

- 189. *Nitraria tridentata*, Desf. El-Ghor.
- 190. *Zygophyllum dumosum*, Boiss. Lower part of road from Khan
Hathrûrah to el-Ghor.
- 191. *Fagonia glutinosa*, Del. Callirrhoë.
- 192. *grandiflora*, Boiss. Lower part of Wilderness of Judea.
- 193. *mollis*, Del. Between Mar Saba and Dead Sea.
- 194. *Peganum Harmala*, L. Ascent from el-Ghor.

XIX.—GERANIACEÆ.

- 195. *Geranium tuberosum*, L. Ascent from el-Ghor to Nebo.
- 196. *rotundifolium*, L. General.
- 197. *molle*, L. General.
- 198. *lucidum*, L. Ascent from el-Ghor to Nebo.
- 199. *Erodium Romanum*, L. 'Ammân.
- 200. *dissectum*, L. Moab.
- 201. *cicutarium*, L. Moab, Gilead, Haurân.
- 202. *cichonium*, L. Haurân.
- 203. *gruinum*, L. Moab, Gilead.
- 204. *laciniatum*, Cav. Flanks of Nebo.
- 205. *moschatum*, L. Moab.

206. *Erodium malacoides*, L. Gilead.
 207. *hirtum*, Forsk. Hot valleys debouching into Dead Sea.
 208. *glaucophyllum*, Ait. Near Khan Hathrûrah. The size of
 the leaves in this species varies in different specimens
 from 5 lines to 3 inches long.

XX.—RUTACEÆ.

209. *Haplophyllum Buxbaumii*, Poir. Ascent to Nebo, Haurân.
 210. var. *corymbulosum*, Boiss. Shittim Plain.
 211. *longifolium*, Boiss. Hot rocks on both flanks of
 el-Ghor.

XXI.—SIMARUBEÆ.

212. *Balanites Ægyptiaca*, Del. Plain of Jericho.

XXII.—TEREBINTHACEÆ.

213. *Rhus Coriaria*, L. Jebel Husha', Jebel-ed-Durûz.
 214. *Pistacia Terebinthus*, L., var. *Palæstina* (P. *Palæstina*, Boiss).
 Moab, Gilead, Jebel-ed-Durûz.

XXIII.—RHAMNEÆ.

215. *Zizyphus Spina-Christi*, L. El-Ghor on both sides of Jordan.
 216. *Rhamnus punctata*, Boiss. Moab, Gilead.
 Palæstina, Boiss. Ascent to Moab.

XXIV.—MORINGEÆ.

217. *Moringa aptera*, Gært. Callirrhoë, on the road to Ma'in, a few
 hundred yards from the springs. I met with only one tree, and
 close by it a tree of *Acacia tortilis*.

XXV.—LEGUMINOSEÆ.

218. *Anagyris fœtida*, L. Woods south of Es-Salt.
 219. *Retama Rœtam*, Forsk. El-Ghor, and the lower mountains flank-
 ing it.
 220. *Ononis Natrix*, L. Moab, Gilead.
 221. var. *stenophylla*, Boiss. Moab.
 222. var. *laxiuscula*, Post. In pumice near Shuhba,
 Haurân.
 223. *Antiquorum*, L. Ascent to Nebo.

224. *Ononis ornithopodoides*, L. Khan Hathrûrah.
225. *biflora*, Desf. Ma'in.
226. *pubescens*, L. Gilead.
227. *hirta*, Desf. Haurân, Plain of Sharon.
228. *serrata*, Forsk. Ma'in.
229. *Calycotome villosa*, L. Moab, Gilead.
230. *Trigonella astroites*, F. et M. Haurân.
231. *spinosa*, L. Moab.
232. *monantha*, C. A. M. Haurân.
233. *Trigonella Coele-Syriaca*, Boiss. Haurân, var. with pods constricted
between the seeds.
234. *Hieroslymitana*, Boiss. Moab, Gilead.
235. *Kotschyi*, Fenzl. Moab, Gilead.
236. *spicata*, L. Moab, Gilead.
237. *Arabica*, Del. El-Ghor.
238. *radiata*, L. Haurân.
239. *Medicago scutellata*, All. Moab, Haurân.
240. *rotata*, Boiss. Ma'in to Callirrhœ.
241. *denticulata*, Willd. Gilead, Haurân.
242. *pentacycla*, D. C. Gilead.
243. *tuberculata*, Willd. Haurân.
244. *coronata*, Lam. Moab.
245. *Trifolium arvense*, L. Haurân.
246. *stellatum*, L. Flanks of Nebo.
247. *angustifolium*, L. Moab, Gilead, Haurân.
248. *Haussknechtii*, Boiss. Haurân.
249. *Asadami*, Post. In a field near the mill above Kureiyah,
on the road to El-Kûfr, at the base of Jebel-ed-Durûz.
250. *scutatum*, Boiss. Moab.
251. *clypeatum*, L. Gilead.
252. *scabrum*, L. Gilead.
253. *pilulare*, Boiss. Moab, Gilead, Haurân.
254. *globosum*, L. Haurân.
255. *physodes*, Stev. Gilead, Jebel-ed-Durûz.
256. *spumosum*, L. Haurân.
257. *resupinatum*, L. Common throughout.
258. *tomentosum*, L. Ascent from el-Ghor to Nebo.
259. *xerocephalum*, Fenzl. Jebel-el-Durûz.
260. *repens*, L. Moab.
261. *Boissieri*, Guss. 'Ajlûn, Gilead.
262. *erubescens*, Fenzl. Gilead.
263. *procumbens*, L. Gilead.
264. *Hymenocarpus circinnatus*, L. Common throughout.
265. *Lotus Creticus*, L. Gilead.
266. *tenuifolius*, Rechb. Ford of Jabbok.
267. *lamprocarpus*, Boiss. Ford of Jabbok.
268. *Gebelia*, Vent. *genuinus*, Boiss. Haurân.

269. *Lotus conimbricencis*, Brot. Moab.
270. *peregrinus*, L. Mountains of Moab.
271. *Tetragonolobus* *Palæstina*, Boiss. Moab. This species should probably rank only as a variety of *T. purpureus*, Mœnch.
272. *Psoralea bituminosa*, L. Moab, Gilead.
273. *Glycyrrhiza glabra*, L., var. *violacea*, Boiss. New bridge of the Jordan.
274. *Astragalus epiglottis*, L. Ford of Jabbok.
275. *tribuloides*, Del. Salihîyah, Damascus.
276. *cruciatus*, Link. Moab, Gilead, Haurân.
277. *triradiatus*, Bge. Haurân.
278. *Damascenus*, Boiss. et Gaill. Haurân.
279. *callichrois*, Boiss. Khan Hathrûrah. Plain of Moab.
280. *conduplicatus*, Bertol. Haurân.
281. *brachyceras*, Ledeb. Moab.
282. *hamosus*. Moab.
283. *scorpiodes*. In wheat-fields between Bosrah and Kureiyah, Haurân.
284. *cretacens*, Boiss. et Ky. Woods near Es-Salt.
285. *veixillaris*, Boiss. Bosrah to Kureiyah, near the latter, in a field by the path.
286. *Christianus*, L. Top of Jebel Husha', near the Nebi.
287. *Alexandrinus*, Boiss. Moab, Gilead, Haurân.
288. *Alexandrinus*, Boiss., var. *elongatus*, Barbey. Moab, Gilead.
289. *neurocarpus*, Boiss. Bosrah.
290. *Bethlehemiticus*, Boiss. Moab, Jebel Kuleib.
291. *Aintabicus*, Boiss. Jebel Kuleib.
292. *deinacanthus*, Boiss. Woods near Es-Salt; Jebel-ed-Durûz.
293. *Forskahlei*, Boiss. El-Ghor, 'Ayun Musa.
294. *ocephalus*, Boiss. Haurân.
295. *sanctus*, Boiss. Khan Hathrûrah. Moab, Gilead.
296. *Trachoniticus*, Post. Sowarat-el-Kebirah.
297. *angustifolius*, Lam. Jebel Kuleib.
298. *Dorycnium lamprocarpum*, Boiss. Ford of Jabbok.
299. *Scorpiurus sulcata*, L. New bridge, Jordan.
300. *Biserrula Pelecinus*, L. Haurân.
301. *Coronilla scorpioides*, L. Moab, Haurân.
302. *Onobrychis Crista.-Galli*, L. Everywhere.
303. *æquidentata*, S. and Sm. Gilead.
304. *gracilis*, Bess. Moab, Gilead.
305. *Cadmea*, Boiss. Moab, Gilead, Haurân.
306. *aurantiaca*, Boiss. Gilead.
307. *Vicia sericocarpa*, Fenzl. Moab.
308. *sativa*, L. Everywhere.
309. *lathyroides*, L. Woods between Amman and Es-Salt.

310. *Vicia peregrina*, L. Woods south of Es-Salt. Haurân.
 311. *Narbonensis*, L., *var pilosa*, Post. Woods south of Es-Salt.
 312. *serratifolia*, Jacq. Leaves serrate from middle to apex.
 Haurân.
 313. *tenuifolia*, Roth. Jebel Kuleib.
 314. *Ervilia*, L. Moab, Gilead, Haurân.
 315. *Pakistina*, Boiss. El-Ghor, Moab, Gilead.
 316. *gracilis*, Loisel. Moab, Gilead.
 317. *Ervum Lenticula*, Schreb. Woods south of Es-Salt.
 318. *Lens*, L. Cultivated everywhere, and escaped.
 319. *Cicer arietinum*, L. Cultivated everywhere, and run wild.
 320. *Lathyrus aphaca*, L. Moab, Gilead.
 321. *amœnus*, Fenzl. Moab, Gilead, Haurân.
 322. *Cicera*, L. Haurân.
 323. *Hierosolymitanus*, Boiss. Gilead.
 324. *Orobis sessilifolius*, S. and Sm. Woods south of Es-Salt.
 325. *Pisum elatius*, M. B. Moab, Gilead.
 326. *humile*, Boiss, et Noë. Haurân.
 327. *Ceratonia Siliqua*, L. Gilead.
 328. *Prosopis Stephaniana*, M. B. Jordan valley.
 329. *Acacia tortilis*, Hayne. Jordan valley, Callirrhoë.

XXVI.—ROSACEÆ.

330. *Amygdalus communis*, L. Gilead.
 331. *var. minor*, Post. 'Ayun Musa.
 332. *Potentilla reptans*, L. Gilead.
 333. *Poterium verrucosum*, Ehr. Gilead, Jebel Kuleib.
 334. *spinosum*, L. Common on rocky hill sides.
 335. *Rosa canina*, L. *var. coriacea*, Boiss. Jebel Kuleib.
 336. *Rubus tomentosus*, Borckh. Moab, Gilead.
 337. *Syrica*, Boiss. El-Jowailil. A specimen with obtuse obliquely
 mucronate leaves.
 338. *Cratægus Azarolus*, L. Moab, Jebel Kuleib.
 339. *monogyna*, Willd. Haurân, Jebel-ed-Durûz.
 340. *Cotoneaster nummularia*, F. and M. Jebel Kuleib.

XXVII.—GRANATEÆ.

341. *Punica Granatum*, L. Gilead.

XXVIII.—MYRTACEÆ.

342. *Myrtus communis*, L. Gilead.

XXIX.—CRASSULACEÆ.

343. *Umbilicus intermedius*, Boiss. Moab, Gilead.
 344. *lineatus*, Boiss. Shubbah, at the edge of the Leja. This
 should be regarded only as a depauperated cymose
 variety of *U. Libanotica*, Labill.

XXX.—LYTHRARIÆ.

345. *Lythrum Græfferi*, Ten. Moab, Gilead.

XXXI.—CUCURBITACEÆ.

346. *Citrullus Colocynthis*, L. El-Ghor.
 347. *Bryonia multiflora*, Boiss. et Held. Gilead.

XXXII.—FICOIDEÆ.

348. *Mesembryanthemum nodiflorum*, L. El-Ghor, Callirrhoë.
 349. *Aizoön Canariense*, L. Callirrhoë.

XXXIII.—UNBELLIFERÆ.

350. *Eryngium glomeratum*, Boiss. Haurân.
 351. *Creticum*, L. Moab, Haurân.
 352. *Buplevrum nodiflorum*, L. Gilead.
 353. *Astoma seselifolium*, D. C. Es-Salt, Haurân.
 354. *Scaligeria Cretica*, Un. Gilead.
 355. *Lagecia cuminoides*, L. Mountains of Moab.
 356. *Smyrniurn connatum*, Boiss. et Ky. Haurân.
 357. *olusatrum*, L. Woods near Es-Salt.
 358. *Smyrniopsis* (*Opoponax* ?) *Syriaca*, Boiss. Haurân.
 359. *cachroides*, Boiss. Haurân.
 360. *Conium maculatum*, L. Gilead.
 361. *Lecockia Cretica*, Lam. Woods, Gilead.
 362. *Hippomarathrum Boissieri*, Reut. Jebel Kuleib.
 363. *Colladonia crenata*, Fenzl. Moab, Gilead.
 364. *anisoptera*, Boiss. Haurân.
 365. *Apium graveolens*, L. Tel-el-Hammâm.
 366. *Pimpinella corymbosa*, Boiss. Table-land of Moab, Haurân.
 367. *eriocarpa*. Ascent from El-Ghor to 'Ayûn Musa.
 368. *Synelcosciadium Carmeli*, Boiss. Gilead.
 369. *Bifora testiculata*, L. Haurân.
 370. *Carum elegans*, Fenzl. Gilead ; Haurân, near mountains.
 371. *Ammi majus*, L. Common throughout.
 372. *Visnaga*, Lam. Common throughout.

373. *Falcaria Rivini*, Host. Moab.
 374. *Anthriscus nemorosa*, M. B. Jebel Kuleib.
 375. *syvestris*, L. Sûf to 'Ajlûn, in open glades in the woods.
 376. *lamprocarpa*, Boiss. Wadi-es-Sîr.
 377. *Physocaulos nodosus*, Tourn. Jebel Husha', Wadi-es-Sîr.
 378. *Prangos ferulacea*, L., var. *scabra*, Boiss. Jebel Kuleib.
 379. *melicocarpa*, Boiss., var. *Trachonitica*, Post. On the volcanic scorïæ, on the sides and at base of Tell Shihân, Lejâ.
 380. *Cachrys goniocarpa*, Boiss. Gilead.
 381. *Ferula communis*, L. El-Ghor, Moab.
 382. *Ferulago Aurantica*, Post. Kureiyah, Haurân.
 383. *Exoacantha heterophylla*, Lab. Moab.
 384. *Kruberia peregrina*, L. Haurân, Common on Philistine plains.
 385. *Ainsworthia trachycarpa*, Boiss. Moab.
 386. *Tordylium Ægyptiacum*, L. Moab, Gilead.
 387. *Malabaila Sekakul*, Russ. Flanks of El-Ghor.
 388. *Daucus Jordanicus*, Post. El-Ghor
 389. *Chetosciadium trichospermum*, L. Mountains of Moab.
 390. *Daucus subsessilis*, Boiss. Jebel Husha'. A plant not heretofore observed in the East.
 391. *Caucalis tenella*, L. Mountains of Moab.
 392. *leptophylla*, L. Haurân.
 393. *Torilis triradiata*, Boiss. et Held. Burmah, Gilead.
 394. *neglecta*, Roem. et Sch. Gilead.
 395. *nodosa*, L. Gilead.
 396. *Turgenia latifolia*, L. Gilead, Haurân.
 397. *Lisæa Syriaca*, Boiss. Haurân.

XXXIV.—CAPRIFOLIACEÆ.

398. *Lonicera Etrusca*. Woods south of Es-Salt.
Lonicera mummularifolia. At northern base of cone of Jebel Kuleib.

XXXV.—RUBIACEÆ.

399. *Rubia tinctorum*, L. Moab, Gilead.
 400. *Callipeltis Cucullaria*, L. Moab, Gilead.
 401. *Vaillantia hispida*, L. Moab, Gilead.
Galium verum. Jebel Kuleib.
 402. *tricorne*, With. Moab, Gilead, Haurân.
 403. *murale*, L. Moab, Gilead.
 404. *Aparine*, L. Moab, Gilead, Haurân.
 405. *sparium*, L., var. *Vaillantii*, Gr. et Godr. Moab, Gilead.
 406. *nigricans*, Boiss. Haurân.

407. *Galium Judaicum*, Boiss. Moab, Khan Hathrûrah to Jericho.
 408. *setaceum*, Lam. Ascent from El-Ghor to Nebo. Fruiting
 pedicels of this variety 2 to 6 times as long as fruit.
 409. *coronatum*, S. and Sm. Moab, Gilead, Haurân.
 410. *articulatum*, L. Moab, Gilead, Haurân.
 411. *Meriarpæa vaillantoides*, Boiss. Haurân.
 412. *Asperula arvensis*, L. Moab, Gilead, Haurân.
 413. *Sherardia arvensis*, L. Moab, Gilead, Haurân.

XXXVI.—VALERIANACEÆ.

414. *Valerianella diodon*, Boiss. Haurân.
 415. *Orientalis*, Schlecht. Gilead.
 416. *truncata*, Rehb. Gilead, Haurân.
 417. *coronata*, Willd. Moab, Gilead.
 418. *vesicaria*, Willd. Moab, Gilead, Haurân.
 419. *Kotschyi*, Boiss. Haurân.
 420. *Boissieri*, Krok. Haurân. Should be a mere variety of
 the last.

XXXVII.—DIPSACEÆ.

421. *Cephalaria Syriaca*, L. Moab, Gilead.
 422. *var. sessilis*, D. C. Haurân.
 423. *Scabiosa Ucranica*, L. Moab, Gilead.
 424. *prolifera*, L. Moab, Gilead, Haurân.
 425. *Palestina*, L. Moab, Gilead, Haurân.
 426. *Pterocephalus plumosus*, L. Moab, Gilead, Haurân.
 427. *pulverulentus*, Boiss. et Bl. Haurân.

XXXVIII.—COMPOSITÆ.

428. *Erigeron Canadense*, L. Common along roadsides.
 429. *Bellis perennis*, L. Gilead.
 430. *Asteriscus aquaticus*, L. Common.
 431. *graveolens*, Forsk. Moab.
 432. *Pallenis spinosa*, L. Moab.
 433. *Iphiona juniperifolia*, Cass. Lower valleys of Moab.
 434. *Conyza Dioscoridis*, Rauw. El-Ghor.
 435. *Phagnalon rupestre*, L. Mountains of Moab.
 436. *Helichrysum sanguineum*, L. Jebel Husha'.
 437. *Filago spathulata*, Presl. Haurân.
 438. *Germanica*, L. Gilead.
 439. *Achillea micrantha*, M. B. Moab, Gilead.
 440. *Santolina*, L. Moab.
 441. *falcata*. Gilead, Haurân.

442. *Anthemis montana*, L. Haurân.
443. *cornucopiæ*, Boiss. Nebo.
444. *hyalina*, D. C. Haurân.
445. *tinctoria*, L. Haurân.
446. var. *discoidea*, Boiss. Gilead.
447. *Cotula*, L. Moab, Gilead, Haurân.
448. *altissima*, L. Moab.
449. *Chrysanthemum Coronarium*, L. Throughout.
450. *segetum*, L. Throughout.
451. *Artemisia monosperma*, Del. Moab.
452. *Herba-alba*, Asso. El-Ghor.
453. *Senecio vernalis*, W. K. Common throughout.
454. *coronopifolius*, Desf. El-Ghor.
455. *Calendula Ægyptiaca*, Desf. Common throughout.
456. *Palæstina*, Boiss. Flanks of El-Ghor.
457. *Dipterocome pusilla*, F. and M. Haurân.
458. *Gundelia Tournefortii*, L. Moab.
459. *Echinops viscosus*, D. C. Gilead.
460. *Chardinia xeranthemoides*, Desf. Deep valleys of Moab.
461. *Atractylis cancellata*, L. Shittim plain.
462. *Notobasis Syriaca*, L. Moab, El-Ghor.
463. *Onopordon Illyricum*, L. Gilead, Haurân.
464. *ambiguum*, Fresen. Haurân.
465. *Silybum Marianum*, L. Tel-el-Hammâm.
466. *Amberboa crupinoides*, Desf. Moab.
467. *Centaurea Trachonitica*, Post. Near Shuhba.
468. *eryngioides*, Lam. Wady Kelt.
469. *cyanoides*, Beggr. Gilead.
470. *myriocephala*, Sch. Gilead, Haurân.
471. *Behen*, L. Haurân.
472. *calcitrapa*, L. Haurân.
473. sp. Moab, between Ma'in and Callirrhoë.
474. *pallescens*, Del. Tell-el-Hammâm.
475. *Carthamus* sp. Moab.
476. *nitidus*, Boiss. Moab.
477. *Carduus argentatus*, L. Moab.
478. *Scolymus Hispanica*, L. Moab.
479. *Rhaponticum pusillum*, Labill. Moab.
480. *Rhagadiolus stellatus*, D. C. Gilead.
481. *Hedypnois Cretica*, L. Moab.
482. *Hagoseris Galilea*, Boiss. Haurân.
483. *Crepis Hierosolymitana*, Boiss. Gilead.
484. *Thrinicia tuberosa*, L. Gilead.
485. *Leontodon hispidulum*, L. Moab.
486. *Hypochæris*, sp. Ammân.
487. *Lactuca tuberosa*, L. Gilead.
488. *Sonchus asper*, Vill. Moab.

489. *Sonchus oleraceus*, L. Ascent to Moab.
 490. *Zollikofferia mucronata*, Forsk. New bridge of Jordan.
 491. *Scorzonera phæopappus*, Boiss. Haurân.
 492. *papposa*, D. C. Moab.
 493. *Jacquiniana*, Koch. Haurân.
 494. *Tragopogon bupthalmoides*, Boiss. Moab, Haurân.

XXXIX.—CAMPANULACEÆ.

495. *Campanula dichotoma*, L. Moab, Gilead.
 496. *Rapunculus*, L. Gilead.
 497. *Specularia Speculum*, L. Moab, Gilead, Haurân.
 498. *falcata*, Ten. Gilead.

XL.—ERICACEÆ.

499. *Arbutus Andrachne* L., var. *serratula*, Post. Mountains of Moab and Gilead. This tree is known in Southern Palestine and east of the Jordan as *Qaikob*, which name in Lebanon is applied to the Maple, while the *Arbutus* is there known as *Qotlib*.

XLI.—PRIMULACEÆ.

500. *Cyclamen latifolium*, Sibth. and Sm. Rocks, Moab, Gilead.

XLII.—PLUMBAGINEÆ.

501. *Statice Thouini*, Viv. Jordan valley and flanking hills to the sea level.
 502. *pruinosa*, L. Dead Sea and valleys above it. This species has large, 1 to 3 inches long, obovate leaves, tapering to a petiole, but they are not usually seen in herbaria. Boissier says that the leaves are *small*. There are no specimens with leaves among the many in his herbarium.
 503. *spicata*, Willd. Jordan valleys, Damascus plain.

XLIII.—STYRACACEÆ.

504. *Styrax officinale*, L. Moab, Gilead.

XLIV.—OLEACEÆ.

505. *Olæa Europæa*, L. Moab.

XLV.—APOCYNACEÆ.

506. *Vinca herbacea*, W. K. Gilead.
 507. *Nerium Oleander*, L. Moab, Gilead, Haurân.

XLVI.—ASCLEPIADACEÆ.

508. *Periploca aphylla*, Dec. By a canal near Tell-el-Hammâm, in the Shittim plain.
 509. *Calotropis procera*, Willd. Shittim plain.
 510. *Pentatropis spiralis*, Forsk. Callirrhoë.
 511. *Dæmia cordata*, R. Br. Callirrhoë.

XLVII.—BORRAGINEÆ.

512. *Trichodesma Africanum*, L. Callirrhoë.
 513. *Boissieri*, Post. Ruins of Kasr-el-'Abd, at 'Arak-el-Emîr.
 514. *Heliotropium Bovei*, Boiss. Moab.
 515. *villosum*, Willd. Moab.
 516. *Europæum*, L. Moab.
 517. *Cynoglossum Nebrodense*, Guss. Jebel Husha'.
 518. *pictum*, Ait. Everywhere.
 519. *Trachelanthus Kurdica*, Ky. Wâdy-es-Sîr, with linear calyx-lobes and pedicels twice as long as calyx. This species is probably the same as *T. pereana*, Paine.
 520. *Solenanthus amplifolius*, Boiss. Jebel Kuleib, among the pumice on the northern declivity below the summit.
 521. *Asperugo procumbens*, L. Moab, Gilead.
 522. *Anchusa Italica*, Retz. Moab, Gilead, Haurân.
 523. *strigosa*, Labill. Moab.
 524. *neglecta*, Alphe D. C. Birket-Dân, Jebel-ed-Durûz.
 525. *Nonnea obtusifolia*, Willd. Moab, Gilead.
 526. *melanocarpa*, Sibth. et Sm. Haurân.
 527. *Alkanna strigosa*, Boiss. 'Ayûn Mûsa.
 528. *Orientalis*, L., var. *integrifolia*, Post. El-Kûfr at foot of Jebel Kuleib.
 529. *Myosotis refracta*, Boiss. Jebel Kuleib.
 530. *hispida*, Schlecht. Jebel-ed-Durûz.
 531. *Lithospermum arvense*, L. Moab, Gilead, Haurân.
 532. *incrassatum*, Guss. El-Kûfr.
 533. *Onosma sericeum*, Willd. Haurân. Not to be distinguished from *O. flavum*, Lehm.
 534. *giganteum*, Lam. Jebel Husha', north flank.
 535. *Podonosma Syriacum*, Labill. Fissures of rocks, common.
 536. *Cerinthe major*, Lam. Moab, Gilead.
 537. *Echium plantagineum*, L., var. *puberulentum*, Post. Indument of velvety wool and spreading hairs.

XLVIII.—CONVOLULACEÆ.

538. *Calystegia sepium*, L. Gilead.
 539. *Convolvulus Dorycnium*, L., var. *oxysepalus*, Boiss. El-Ghor, Moab.
 540. *hirsutus*, L. Haurân.
 541. *althæoides*, L. Ascent from El-Ghor to 'Ayûn Mûsa.
 542. *pilosellæfolius*, Desr. At Tell-er-Ramé.
 543. *stachydifolius*, Choisy. Moab, Haurân.
 544. *arvensis*, L. Moab, Gilead, Haurân.
 545. *Scammonia*, L. Gilead.
 546. *Cuscuta planiflora*, Ten. Moab.

XLIX.—SALVADORACEÆ.

547. *Salvadora Persica*, Gare. In clumps about the hot springs at Tell-el-Hammâm. The leaves of this specimen are oblong-linear.

L.—SOLANACEÆ.

548. *Solanum nigrum*, L. Moab, Gilead, Haurân.
 549. *Dulcamara*, L., var. *lyratum*, Post. Lower leaves lyrate-pinnatifid, with one pair of leaflets and one pair of lobes. Gilead.
 550. *coagulans*, Forsk. El-Ghor.
 551. *Withania somnifera*, L. Rocks above Callirrhoë; a variety with long peduncles.
 552. *Lycium Arabicum*, Schw. El-Ghor, Moab.
 553. *Mandragora officinarum*, L. Gilead, Haurân.
 554. *Hyoscyamus reticulatus*, L. Moab, Gilead, Haurân.
 555. *aureus*, L. Ascent from El-Ghor to 'Ayûn Mûsa.

LI.—SCROPHULARIACEÆ.

556. *Verbascum ptychophyllum*, Boiss. Moab, Gilead.
 557. *Gileadense*, Post. Wâdi-es-Sîr.
 558. *pinnatum*, L. Ascent from El-Ghor to 'Ayûn Mûsa.
 559. *Qulebicum*, Post. Jebel Kuleib, south-western declivity of cone.
 560. sp. near Es-Salt. A species only in leaf. Lower leaves oblong, a foot long, densely pannous.
 561. *Celsia heterophylla*, Desf. Gerash, on the aqueduct bridge.
 562. *Linaria Ægyptiaca*, L. Callirrhoë.
 563. *Damascena*, Boiss et. Gaill. Haurân.
 564. *Chalepensis*, L. Ascent from El-Ghor to 'Ayûn Mûsa.
 565. *Linaria Hælava*, Forsk. Top of wall of Jerusalem, valleys about Dead Sea, El-Ghor.

566. *Anarrhinum Orientale*, Bth. Gilead, Jebel-ed-Durûz.
 567. *Scrophularia macrophylla*, Boiss. In caves at 'Ayûn Mûsa.
 568. *Michoniana*, Coss. et Kral. Below caves at 'Ayun Musa.
 var. *tenuisecta*, Boiss. Es-Salt.
 569. *xanthoglossa*, Boiss. Moab, Gilead.
 570. *Gileadensis*, Post. On the road from Sûf to 'Ajlûn
 Gilead.
 571. *variegata*, M. B., var. *Libanotica*, Boiss. Near El-Kûfr,
 under Jebel Kuleib.
 572. *Veronica Anagallis*, L. Common in wet places.
 573. *anagallioides*, Guss. Less common than the last.
 574. *Orientalis*, Mill., var. *tenuifolia*, Boiss. Mountains of
 Gilead.
 575. *Syriaca*, Raem. et Sch. Common throughout.
 576. *Cymbalaria*, Bod. Common throughout.
 577. *Eufragia latifolia*, L. Jebel-ed-Durûz.
 578. *viscosa*, L. Gilead.

LI.—VITICEÆ.

579. *Vitex Agnus-Castus*, L. Jebel-ed-Durûz.

LII.—OROBANCHACEÆ.

580. *Phelipæa lavandulacea*, Rechb. El-Ghor, Jebel-ed-Durûz.
 581. *ramosa*, L. Moab, Haurân.
 582. *lutea*, Desf. El-Ghor.
 583. *Orobanche speciosa*, D. C. Common throughout.
 584. *cernua*, Löff. Sowarat-es-Saghiri.

LIII.—ACANTHACEÆ.

585. *Acanthus hirsutus*, Boiss. Ascent from El-Ghor to 'Ayun Musa.
 586. *Blepharis edulis*, Forsk. On the road a few hundred yards above
 Callirrhoë.

LIII.—LABIATÆ.

587. *Thymus Syriacus*, Boiss, var. *Trachoniticus*, Post. On the hot rocks
 of lava near Brak, El-Leja.
 588. *Mentha sylvestris*, L. Moab.
 589. *Origanum Maru*, L. Moab.
 590. *Micromeria nervosa*, Desf. Mountains of Moab and Gilead.
 591. *Juliana*, L. Gilead.
 592. *Calamintha graveolens*, M. B. Gilead, Jebel-ed-Durûz.
 593. *Melissa officinalis*, L. Konawât.

594. *Salvia pinnata*, L. Jebel Husha'. Gilead.
595. *acetabulosa*, Vahl. Gilead, Haurân.
596. *Pinardi*, Boiss. Moab, Haurân.
597. *spinosa*, L. Haurân.
598. *Syriaca*, Bth. Gilead, Haurân.
599. *ceratophylla*, L. Haurân.
600. *brachycalyx*, Boiss. Moab, Gilead.
601. *Hierosolymitana*, Boiss. Moab, Gilead.
602. *Verbenaca*, L. Moab, Gilead, Haurân.
603. *controversa*, Ten. Moab, Gilead, Haurân.
604. *Horminum*, L. Moab, Gilead, Haurân.
605. *Russelii*, Bth. Shubbah, at the edge of El-Leja.
606. *Zizyphora capitata*, L. Gilead, Haurân.
607. *Nepeta marruboides*, Boiss. et Held. Jebel Kulêb.
608. *Trachonitica*, Post. Among the ruins at Shubbah.
609. *Cilicica*, Boiss. Moab.
610. *curviflora*, Boiss. Jebel Husha'.
611. *cryptantha*, Boiss. et Haussk. Maîn.
612. *Scutellaria fruticosa*, Desf. Gilead, Haurân.
613. *Brunella vulgaris*, L. Moab, Gilead, Haurân.
614. *Stachys Arabica*, Boiss. Ain Hesbân, 'Ammân.
615. *pullulans*, Vent. 'Ain Hesbân. 'Ammân.
616. *Libanotica*, Bth., var. *ericalyx*, Post. Suweidah to 'Atîl,
Haurân
617. *Cretica*, Sibth. et Sm. Jebel Husha'.
618. *Marrubium cuneatum*, Russ. Jebel Husha', Haurân.
619. *Lamium amplexicaule*, L. Moab, Gilead.
620. *moschatum*, L. Moab, Gilead Haurân.
621. *Mollucella lævis*, L. Haurân.
622. *Ballota undulata*, Fresen. Moab, Gilead Haurân.
623. *saxatilis*, Sieb. Ascent from El-Ghor to 'Ayûn Mûsa.
624. *nigra*, L. Gilead.
625. *Phlomis Nissolii*, L. El-Ghor, Moab, Gilead.
626. *viscosa*, Poir. Moab, Gilead, Haurân.
627. *fruticosa*, L., var. *leiotegia*, Post. On the road from Maîn
to Callirrhœ.
628. *Herba-Venti*, L. Moab, Gilead.
629. *Eremostachys laciniata*, L. Moab.
630. *Prasium majus*, L. Moab, Gilead.
631. *Teucrium pruinosum*, Boiss. Haurân.
632. *Polium*, L. Ascent from El-Ghor to 'Ayûn Mûsa.
633. *Teucrium Auraniticum*, Post. In clumps by the roadside from
Bosrah to Kureiyah, Haurân.
634. *Ajuga Orientalis*, L. Moab, Gilead.
635. *Chia*, Poir, var. *tridactylites*, Boiss. Moab.

LIV.—PLANTAGINEÆ.

636. *Plantago lanceolata*, L., var. *altissima*, Boiss. Gilead.
 637. *albicans*, L. 'Ayun Musa, Irbid, Haurân.
 638. *amplexicaulis*, Cav., var. *linearifolia*, Post. Khan Hath-
 rûrah to Jericho.
 639. *Cretica*, Lam. Moab.
 640. *ovata*, Forsk. Khan Hathrûrah to Jericho.
 641. *Plantago ovata*, Forsk., var. *lanata*, Post. Between Irbid and Bosrah
 in Haurân.

LV.—CHENOPODIACEÆ.

642. *Chenopodium album*, L. Common throughout.
 643. *murale*, L. Common throughout.
 644. *Beta vulgaris*, L., a typical, Boiss. Flanks of El-Ghor.
 645. *b maritima*, Boiss. Suleim, Haurân.
 646. *Atriplex Palestinum*, Boiss. Khan Hathrûrah.
 647. *Alexandrinum*, Boiss. Between El-Leja and Damascus.
 648. *leucocladum*, Boiss. Callirrhoë.
 649. *Kochia latifolia*. Fres. Callirrhoë.
 650. *Camphorosma Monspeliacum*, L. Moab.
 651. *Salicornia fruticosa*, L. Sowarat-el-Kebîrah.
 652. *Suaeda fruticosa*, L. Callirrhoë.
 653. *asphaltica*, Boiss. Khan Hathrûrah to Dead Sea.
 654. *Atraphaxis spinosa*, L. Ascent from El-Ghor to 'Ayûn Mûsa.

LVI.—POLYGONACEÆ.

655. *Polygonum Bellardi*, All. El-Kufr, Haurân.
 656. *polcnemoides*, Jaub. et Sp. Kaldûn.
 657. *aviculare*, L. Ascent from El-Ghor to 'Ayûn Mûsa.
 658. *Rumex conglomeratus*, Murr. Wady-es-Sîr.
 659. *obtusifolius*, L. Haurân.
 660. *tuberosus*, L. Haurân.
 661. *roseus*, L. Khan Hathrûrah to Jericho.
 662. *lacerus*, Balb. Ascent from El-Ghor to 'Ayûn Mûsa.
 663. *Emex spinosus*, L. Flanks of El-Ghor.

LVII.—ARISTOLOCHIACEÆ.

664. *Aristolochia Maurorum*, L. Jebel Kuleib, Es-Salt.

LVIII.—THYMELEÆ.

665. *Lygia pubescens*, Guss. El-Ghor.

LIX.—SANTALACEÆ.

666. *Osyris alba*, L. Moab, Gilead.

LX.—LORANTHACEÆ.

667. *Viscum cruciatum*, Sieb. Moab, Gilead.
 668. *Loranthus Acaciæ*, Zucc. El-Ghor.

LXI.—CYNOCRAMBEÆ.

669. *Cynocrambe prostrata*, Gaertn. Jebel Husha'.

LXII.—EUPHORBIACEÆ.

670. *Euphorbia falcata*, L. Gilead.
 671. var. *Galilæa*, Boiss. Moab.
 672. *aulacosperma*, Boiss. 'Ajlûn.
 673. *arguta*, Schrad. Haurân.
 674. *thamnoides*, Boiss. 'Ayûn Mûsa, Jebel Husha'.
 675. *Helioscopia*, L. Gilead, Haurân.
 676. *tinctoria*, L. Plain of Damascus.
 677. var. *schizoceras*, Boiss. Gilead.
 678. *Ricinus communis*, L. El-Ghor.
 679. *Andrachne telephioides*, L. El-Ghor, Gilead.
 680. *Mercurialis annua*, L. Everywhere.

LXIII.—URTICACEÆ.

681. *Celtis Australis*, L. Gilead.
 682. *Ficus Carica*, L. Moab, Gilead.
 683. *Urtica pilulifera*, L. Common.
 684. *membranacea*, Poir. Common.
 685. *Parietaria officinalis*, L. Moab, Gilead.

LXIV.—JUGLANDACEÆ.

686. *Juglans regia*, L. Gilead.

LXV.—PLATANACEÆ.

687. *Platanus Orientalis*, L. Moab, Gilead.

LXVI.—CUPULIFERÆ.

688. *Quercus coccifera*, L. Moab, Gilead, Haurân
 689. *Cerris*, L. Jebel Kuleib.
 690. *Ægilops*, L. Moab, Gilead.

LXVII.—SALICACEÆ.

691. *Salix fragilis*, L. El-Kâfr.
 692. *sp. near alba*, L. Tell-el-Hammâm.
 693. *Populus Euphratica*, Oliv. El-Ghor.
 694. *nigra*, L. Cultivated everywhere along watercourses.

LXVIII.—EPHEDRACEÆ.

695. *Ephedra Alte*, L. Jebel Siâghab.
 696. *campylopoda*, C. A. M. Ascent from El-Ghor to 'Ayûn Mûsa.

LXIX.—CONIFERÆ.

697. *Pinus Halepensis*, Mill. Moab, Gilead.

LXX.—ORCHIDACEÆ.

698. *Cephalanthera ensifolia*, Murr. Woods, Moab and Gilead.
 699. *Limodorum abortivum*, L. Woods south of Es-Salt, Jebel Husha'.
 700. *Orchis sancta*, L. Gilead.
 701. *punctulata*, Stev., var. *sepulchralis*, Boiss. In a clearing on the road between 'Ammân and Es-Salt. The specimens found had pallid green-nerved sepals.
 702. *tridentata*, Scop. Gilead.
 703. *saccata*, Ten. Moab, Gilead.
 704. *Anatolica*, Boiss. Woods south of Es-Salt.
 705. *Anacamptis pyramidalis*, L. Between Burmah and Gerash, Gilead.
 706. *Ophrys apifera*, Huds. Between Burmah and Gerash, Gilead.

LXXI.—IRIDACEÆ.

707. *Iris Sisyrinchium*, L. Everywhere.
 708. *Sari*, Baker. Plains of Moab.
 709. *Gladiolus Illyricus*, var. *Anatolicus*, Boiss., Koch. Moab, Gilead, Haurân.
 710. *atroviolaceus*, Boiss. Haurân.
 711. *Ixiolirion montanum*, Labill. Moab.

LXII.—LILACEÆ.

712. *Asparagus acutifolius*, L. Common throughout.
 713. *stipularis*, Forsk. El-Ghor.
 714. var. *brachyclados*, Boiss. El-Ghor.
 715. *Lownei*, Baker. New bridge of Jordan. A variety with leaves spurred at base; the specimen in the Herbarium of Kew is destitute of spurs.

716. *Asphodelus microcarpus*, Viv. El-Ghor, Moab, Gilead.
 717. *fistulosus*, L. El-Ghor, Moab.
 718. *Asphodeline lutea*, L. Haurân.
 719. *brevicaulis*, Bert. Jebel Husha', Haurân.
 720. *brevicaulis*, Bert., var. *foliosus*, Post. Stem leafy to base
 of panicle. Haurân.
 721. *Taurica*, Pall. Jebel Neba.
 722. *Tulipa Oculus-Solis*, L. Gilead.
 723. *montana*, Lindl. Jebel Kuleib, Haurân plain.
 724. *Allium Hierochuntinum*, Boiss. Flanks and valley of El-Ghor,
 Haurân.
 725. *stamineum*, Boiss. El-Ghor.
 726. *Sindjarensis*, Boiss. et Haussk. Sowarat-el-Kebîrah.
 727. *trifoliatum*, Cyr. Haurân.
 728. *Neapolitanum*, Cyr. Moab, Gilead, Haurân.
 729. *Schuberti*, Zucc. Haurân.
 730. *nigrum*, L. New bridge of Jordan.
 731. *Erdelii*, Zucc. Jebel Siâghah, Gilead, Jebel-el-Durûz.
 732. *Scilla hyacinthoides*, L. Wady-es-Syr.
 733. *Urginea maritima*, L. Ascent from El-Ghor to 'Ayûn Mûsa.
 734. *Muscari comosum*, Mill. Moab, Gilead, Haurân.
 735. *Pinardi*, Boiss. Jebel Siâghah.
 736. *longipes*, Boiss. Jebel Kuleib.
 737. *racemosum*, L. Haurân.
 738. *Bellevia macrobotrys*, Boiss. Es-Salt, Haurân.
 739. *densiflora*, Boiss. Merj, Damascus.
 740. *Ornithogalum Narbonense*, L. Moab, Gilead, Haurân.
 741. var. *densum*, Boiss. Haurân.
 742. *umbellatum*, L. Moab, Gilead, Haurân.
 743. *montanum*, Cyr. Gilead.
 744. *Fritillaria Libanotica*, Boiss. Haurân.

LXXIII.—SMILACEÆ.

745. *Smilax aspera*, L., var. *Mauretanica*, Boiss. Moab.

LXXIV.—COLCHIACEÆ.

746. *Colchicum Ritchii*, R. Br. Shuhbah, El-Leja.

LXXV.—AROIDEÆ.

747. *Arum Dioscoridis*, Sibth. et Sm. Moab.
 748. *hygrophilum*, Boiss. Gilead.
 749. *Helicophyllum crassipes*, Boiss. Gilead.

LXXVI.—ALISMACEÆ.

750. *Alisma Plantago*, L. Moab, Haurân.
 751. *natans*, L. In a pool, between 'Ajlûn and Irbid, Gilead. A plant not heretofore observed in the East.

LXXVII.—BUTOMACEÆ.

752. *Butomus umbellatus*, L. El-Ghor, Haurân.

LXXVIII.—TYPHACEÆ.

753. *Typha latifolia*, L. Ford of Jabbok, Gilead.

LXXIX.—JUNCACEÆ.

754. *Juncus maritimus*, L. Ascent from El-Ghor to 'Ayûn Mûsa.

LXXX.—PALMEÆ.

755. *Phoenix dactylifera*. Indigenous in valleys about the Dead Sea and in the Ghor.

LXXXI.—CYPERACEÆ.

756. *Cyperus longus*, Sieb. Moab, Gilead.
 757. *Scirpus Holoschænus*, L. Gilead.
 758. *maritimus*, L. Gilead.
 759. *Carex divisa*, Huds. Haurân.
 760. *stenophylla*, Vahl. Moab, Gilead.
 761. *Mediterranea*, C. B. Clarke. Haurân. A new species found also in Sicily.

LXXXII.—GRAMINEÆ.

762. *Pennisetum ciliare*, L. Shittim plain.
 763. *asperifolium*, Desf. Ascent from El-Ghor to Nebo.
 764. *Imperata cylindrica*, L. Gilead.
 765. *Saccharum Ægyptiacum*, L. Ascent from El-Ghor to Moab.
 766. *Aruudo Donax*. Ascent to Moab.
 767. *Pollinia distachya*, L. Gilead.
 768. *Andropogon foveolatus*, Del. Callirrhoë.
 769. *annulatus*, Forsk. New bridge of Jordan.
 770. *hirtus*, L. Nebo, Moab, Gilead.
 771. *Phalaris minor*, Retz. El-Ghor.
 772. *Canariensis*, L. Moab.
 773. *nodosa*, L. Haurân.

774. *Alopecurus involucreatus*, Post. Kureiyah to el-Kûfr, Haurân.
 775. *anthoxanthoides*, Boiss. Nebo.
 776. *agrestis*, L. Jebel-ed-Durûz.
 777. *pratensis*, L. Moab, Haurân.
 778. *Aristida cærulescens*, Desf. Gilead, Haurân.
 779. *Forskahlei*, Tausch. Callirrhœ.
 780. *Stipa Lagascae*, Raem. et Sch. Plain of Moab.
 781. *passiflora*, Desf. Brak, El-Leja.
 782. *capillata*, Desf. Haurân.
 783. *tortilis*, Desf. A mischievous and annoying weed ; common everywhere.
 784. *Piptatherum miliaceum*, L. Ascent from El-Ghor to Nebo.
 785. *holeiforme*, R. and Sch. Ammân, Es-Salt.
 786. *Milium vernale*, M. B. Moab, Gilead.
 787. *Polypogon Monspelienae*, L. El-Ghor.
 788. *maritimum*, Willd. New bridge of Jordan.
 789. *Lagurus ovatus*, L. Moab.
 790. *Aira capillaris*, Host. Base of Jebel-el-Durûz, between Kureiyah and El-Kufr.
 791. *Ventenata Blanchei*, Boiss. Haurân, between Kureiyah and El-Kufr.
 792. *Avena sterilis*, L. Moab, Gilead, Haurân.
 793. *barbata*, Brot. Moab, Gilead, Haurân.
 794. *var. glabra*. El-Ghor.
 795. *Arrhenatherum elatius*, L., *var. Palæstinum*, Boiss. Moab, Gilead, Haurân.
 796. *Cynodon Dactylon*, L. Common throughout.
 797. *Danthonia*, ? sp. . Jebel Husha'.
 798. *Tetrapogon villosus*, Desf. Callirrhœ.
 799. *Echinaria capitata*, L. Nebo.
 800. *Lamarkia aurea*, L. El-Ghor, Moab, Gilead.
 801. *Cynosurus callitrichus*, W. Barb. Solomon's Pools, Es-Salt, Nebo.
 802. *elegans*, Desf. Es-Salt, 'Ajlûn.
 803. *Kœleria phlæoides*, Vill. Moab, Gilead.
 804. *Catabrosa aquatica*, L. Haurân.
 805. *Melica Cupani*, Guss. Haurân.
 806. *Dactylis glomerata*, L. Everywhere.
 807. *Schismus Arabicus*, Nees. Ghor.
 808. *Poa compressa*, L. Es-Salt.
 809. *annua*, L. Everywhere.
 810. *bulbosa*, L. Everywhere.
 811. *Festuca elatior*, L., *var. pratensis*, Hack. Ammân, Plains of Moab.
 812. *Vulpia ciliata*, Pep. Haurân.
 813. *Catapodium loliaceum*, Huds. Ascent from El-Ghor to Nebo.
 814. *Scleropoa Philistæa*, Boiss. Plain of Sharon.
 815. *Bromus erectus*, Huds. Jebel-ed-Durûz.
 816. *tectorum*, L. Throughout.
 817. *sterilis*, L. Throughout.

A BY FHE
BOUT 50

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	Mea
Mean.	Dry Bulb. t d.
0°5	59°3
1°2	58°2
1°3	62°6
1°2	71°9
1°5	74°5
1°0	78°7
1°6	82°3
1°1	85°4
1°1	83°3
1°4	78°2
1°5	67°1
1°8	57°0
1°7	71°5
11	12

818. *Bromus Matritensis*, L. Everywhere.
 819. *Haussknechtii*, Boiss. Jebel Kuleib.
 820. *macrostachys*, Desf. Moab, Haurân.
 821. *brachystachys*, Horn. New bridge of Jordan.
 822. *rubens*, L. Everywhere.
 823. *scoparius*, L. Everywhere.
 824. *Brachypodium distachyum*, L. Moab, Gilead. Haurân.
 825. *Agropyrum junceum*, Beauv. Mountains of Moab.
 826. *squarrosum*, Roth. Haurân.
 827. *Secale fragile*, M. B. Jebel Husha'.
 828. *Ægilops Aucheri*, Boiss. Ascent from El-Ghor to Nebo.
 829. *crassa*, Boiss. Ascent from El-Ghor to Nebo.
 830. *var. macrathera*, Boiss. El-Ghor.
 831. *triuncialis*, L. Gilead.
 832. *var. brachyathera*, Boiss. Gilead.
 833. *Lolium rigidum*, Gaud. Es-Salt, Haurân, El-Ghor, Jebel Husha'.
 834. *sp.* Ascent from El-Ghor to 'Ayûn Mûsa.
 835. *sp.* Burmah to Gerash, Gilead.
 836. *Hordeum bulbosum*, L. Common throughout.
 837. *murinum*, L. Common everywhere.
 838. *Elymus Caput-Medusæ*, L. Haurân.
 839. *Delileanus*, Schult. Gilead, Haurân.

LXXXIII.—FILICES.

840. *Cheilanthes fragrans*, L. Burmah, Gilead.
 841. *Adiantum Capillus-Veneris*, L. Wet places everywhere. Very fine fronds of it are found in the cave at 'Ayûn Mûsa.
 842. *Ceterach officinarum*, L. Gilead.

LXXXIV.—CHARACEÆ.

843. *Chara*, *sp.* Burmah.

METEOROLOGICAL OBSERVATIONS.

1881.

The numbers in column 1 of this table show the highest reading of the barometer in each month ; of these, the highest appear in the winter, and the lowest in the summer months. The maximum for the year was in January, as in the preceding year, and was 30·235 ins. In column 2, the lowest in each month are shown ; the minimum, 29·524 ins., was in February, in the preceding year it was in April ; the range of readings in the year was 0·711 inch, in the year 1880 it was 0·780 inch. The numbers

in the 3rd column show the range of readings in each month ; the smallest, 0.171 inch, is in October, and the largest, 0.596 inch, in March. The numbers in the 4th column show the mean monthly pressure of the atmosphere ; the greatest is in January, and the smallest in August.

The highest temperature of the air in each month is shown in column 5. The highest temperature in the year was 106° in August, but the temperature reached and exceeded 90° in every month from April to September, with the exception of July, when the maximum was 89° . The first day in the year the temperature reached 90° was on April 8th, and there were three other days in this month when the temperature was more than 90° . In May there were four days when the temperature reached and exceeded 90° ; in June there were three such days ; in August ten days, the highest being 106° , on the 27th ; in September six days. The last day that the temperature reached 90° was on the 25th of September, therefore the temperature reached and exceeded 90° on 27 days in the year. The maximum temperature, both in October and November, was as high as 89° .

The numbers in column 6 show the lowest temperature of the air in each month ; in December the lowest temperature in the year was experienced, viz., 39° , and this temperature occurred on two different nights. Therefore, on only two nights in the year was the temperature so low as 39° , while, in the preceding year, it was as low as 32° , both in January and February. The yearly range of temperature was 67° . The range of temperature in each month is shown in column 7, and these numbers vary from 29° in July and September to 51° in May.

The mean of all the highest by day, of the lowest by night, and of the average daily ranges of temperature, are shown in columns 8, 9, and 10, respectively. Of the high day temperature, the lowest was in February, $64^{\circ}8$; and the highest in August, $89^{\circ}9$. Of the low night temperatures, the coldest, $47^{\circ}4$, took place in December, and the warmest, $70^{\circ}3$, was in August. The mean daily range of temperature, as shown in column 10—the smallest was $17^{\circ}2$ in February, and the largest was $24^{\circ}3$ in June.

In column 11, the mean temperature of each month, as found from observations of the maximum and minimum thermometers only. The month of the lowest temperature was February, $56^{\circ}2$, and that of the highest was August, $80^{\circ}1$. The mean temperature for the year was $66^{\circ}7$, that of the preceding year was $66^{\circ}4$.

The numbers in columns 12 and 13 are the monthly means of a dry and wet bulb-thermometer, taken daily at 9 a.m., and in column 14 the monthly temperature of the dew-point at the same hour, or that of the temperature at which dew would have been deposited. The elastic force of vapour is shown in column 15, and in column 16 the water present in a cubic foot of air ; in January this was as small as $3\frac{3}{4}$ grains, whilst in August it was as large as 8 grains. The numbers in column 18 show the degree of humidity, saturation being considered 100 ; the smallest number in this column is in April, and the largest in December. The

weight of a cubic foot of air, under its pressure, temperature, and humidity, at 9 a.m., is shown in column 19.

The most prevalent winds in January were S.E. and S., and the least prevalent were N. and N.W. In February the most prevalent was S., and the least prevalent were E. and N.W. In March the most prevalent were S.W., S.E. and S., and the least prevalent were N. and E. In April the most prevalent were S. and W., and the least N.E. and E. In May the most prevalent were N.W., W., and S.W., and the least were S.E. and S. In June the most prevalent were S.W., N.W., and W., and the least prevalent were E., S.E., and S. In July and August the most prevalent was S.W., and the least were N., E., and its compounds. In September the most prevalent was S.W., and the least E. and W. In October the most prevalent was N.W., and the least were N. and W. In November and December the most prevalent winds were S.E. and S., and the least prevalent were N., S.W., and W.

The numbers in column 29 show the mean amount of cloud at 9 a.m. ; the month with the smallest amount is June, and the largest February. Of the cumulus, or fine weather cloud, there were 91 instances in the year ; of these there were 18 in July and 18 in August, and 14 in September, and one only in February. Of the nimbus, or rain cloud, there were 53 instances in the year, of which 12 were in February, 11 in December, and 9 in March, 5 only from May to October. Of the cirrus, there were 59 instances in the year, of which 11 were in January, 9 in November, and 8 in February. Of the cirro-cumulus there were 16 instances in the year. Of the stratus 14 instances. Of the cirro-stratus there were 6 instances in the year. And there were 126 instances of cloudless skies.

The largest fall of rain for the month was in November, 5.09 ins. ; the next in order was in December, 5.03 ins., of which 1.91 inch fell on the 21st. In December, 1880, the fall was 10.5 inches. No rain fell from April 20th to the 6th of November, making a period of 189 consecutive days without rain. The fall of rain in the year was 17.49 inches, being 11.19 inches less than in the preceding year. The number of days on which rain fell was 48, in the preceding year the number was 66.

JAMES GLAISHER.

ALTAIC CYLINDERS.

AMONG the Babylonian cylinders—amulets or seals, in the British Museum, and the Phœnician cylinders which are kept with them—there are two or three which appear to belong to the so-called “Hittite” art, because they present hieroglyphic emblems like those of Hamath. It is possible that others classed as Babylonian which present figures of the gods without hieroglyphs may also be of this class (*see* “Guide to Kouyunjik Gallery,” page 136).

Mr. T. G. Pinches (one of our best Akkadian scholars) has kindly sent

me casts of three of these cylinders, which are very similar to those published by Menant and Perrot, from Aidin in Lydia, and other places in Asia Minor. With respect to such cylinders Mr. Pinches says, in the Guide above quoted (p. 126), that they appear to have been used as charms suspended to the wrist, or hung round the neck or waist. The subjects are generally connected with mythology. Another of the same class is in possession of Mr. Greville Chester.¹

No. 1. Menant, *les Pierres Gravées* II, Fig. 111.—Two deities in the usual high cap and skin robe face each other. Between is a bull's head and a scorpion, to the left four small figures under a twisted pattern (often found on these cylinders) with two birds above with long tails. To the left again a figure in a horned cap with sceptre somewhat like those of the god at Boghaz Keui.

The bull and scorpion are the emblems of the second and eighth month (which before 2152 B.C. were the first and seventh month, on account of precession), and they therefore probably indicate spring and autumn. The twist pattern may conventionally represent waves or clouds (it resembles the Chinese sign for cloud); the swallow is the emblem of fate, both in Babylonia and in Egypt. The deity with horned headdress is possibly Ea.

No. 2. Menant, Fig. 112.—The deity with horned cap, followed by a goddess in long skin robe, and by a god with high cap bearing the winged sun on his sceptre, approaches a quadrangular enclosure of twist pattern in which are a man and woman. Her headdress is that worn by the Phœnician and Egyptian goddesses (the globe and feathers), and in her right she holds an *ankh*, or emblem of life; the man wears a tiara or turban, and raises his hand in the attitude of blessing. This may represent a legend like the Median story of the *Vara*, or "garden," in which

¹ Mr. Greville Chester's collection, which he will, no doubt, describe, is of high interest, and contains several undoubted Altaic seals. His great seal from Tarsus may be Babylonian, but is equally likely to be Altaic. It has five designs, which have been published in "Nature." On the base a standing figure presents a trident to one seated on a throne, surrounded by a twisted pattern. On one side the eagle-headed deity (Nisroch) stands before an altar, at which is seated opposite a personage holding a cup and lightning; above him is the winged sun; over the altar the trident is flanked by two luck marks, common in Phœnicia. On the second side this luck mark (which I described in 1883 and 1886) stands between two figures, one seated and holding a stag (perhaps Dara). On the third a figure seated, with tiara and cup in hand (the cup is often held by deities), grasps a bird and a rabbit (emblems of the moon); in the corner is the luck mark. On the fourth side the seated figure holds a *trisul*, or trident, and a bird perches above it. This is one of the finest seals I have seen.

Mr. Greville Chester has also a Babylonian cylinder with a representation of human sacrifice (of which type the British Museum seems only to possess a solitary example), and several Phœnician seals, one with a personal name compounded with *Yah* (the shorter form of the Hebrew Jehovah), as in names read by Mr. Pinches in cuneiform.

the first man was enclosed to protect him from the great winter (Vendidad II, 61), where he is visited by the gods Ea, Istar, and Shamash (Tammuz), as the Chaldean Noah was visited after the flood.

No. 3. Menant II, Fig. 113.—A warrior with sword and spear, with the goat's head (*Tar*) behind him. A smaller personage standing on two mountains with a small deer in front. These face to the right towards two long robed figures with an antelope between, over which is the emblem (found in Phœnicia and Egypt also) of the sun resting in the cup of the crescent moon. The meaning of this combination is perhaps illustrated by the old Chinese compound emblem (Chalmers, p. 107), sun and moon, for *ming*, "bright."

No. 4. Perrot, *Hist. de L'art*, IV, p. 771.—An elaborate design mentioned in "Altaic Hieroglyphs" (2nd edition, page 65). On the upper edge is the twist pattern, and on the lower a sort of curb pattern just like the Chinese emblem for clouds. To the right a deity, marked by a star on his head, sits on a mountain with a deer at his (or her) feet, flanked by hawk-headed cherubs (this may be *Dara* (Ea) or *Istar*). To the left a larger deity, also like the preceding with skin robe, holds a triple lituus, and has the star beneath his throne. To the left again two rampant demons tear one another, and over them are two Altaic hieroglyphs, *Ne-Gug* or *Zi-Gug*, "fighting" or "spirits fighting."¹ To the left again the centre of the design shows a Janus, or two-headed god,² in skin robe, extending a whip towards these demons, and a cross towards three persons in skin robes (two long, one short-skirted), who approach, facing to the right with the hand in attitude of supplication. Beyond these to the left a long robed figure which, like the three suppliants, appears to have a pig-tail,³ faces to the left and holds what may be a snake or a corn-sheaf.

¹ A very curious objection has been taken to the idea that the Hittite texts are religious because the later Assyrian texts are historical. Those who raise this objection seem to forget how much more numerous in antiquity are religious texts than are historical, especially at the earliest period. The British Museum is full of such religious texts from Babylonia and Assyria, as well as from Egypt, and votive texts are common also in Etruria, in Greece, and in Phœnicia. The great lion, with the name and titles of Asshur Nasir Pal, in the British Museum, bears a text in 41 lines in honour of the goddess Istar; and Mr. Pinches remarks: "To such an extent was the worship of the gods carried in Babylonia that *hardly any historical records* are found upon the cylinders of the kings, the inscriptions being entirely devoted to descriptions of the restoration and building of the temples and praises of the gods." This also applies to the texts in Akkadian (dating about 2500 B.C.) found at Tell Loh. Representations, not only of gods, but of demons also, occur on the great sculptures from Nineveh in the Museum.

² This two-headed deity is also to be found on an Akkadian cylinder figured by Perrot.

³ In the great sculptures representing the conquest of Elam in the British Museum several of the Elamites have what looks like a plait or pigtail behind their heads. The Altaic races overspread Elam as well as Media and Chaldea.

Above is the sun-moon emblem for "brightness," already mentioned. Last of all, to the left, a small figure dancing on a fish, supports something which seems to represent the clouds—a Hittite Atlas.

No. 5 (same work, p. 772 Fig. 384).—A four-sided seal. On three sides are figures standing erect on beasts (just as so many deities are represented to stand in India, Phœnicia, &c., &c.). The first, on a horse or ass (*Set*), with the amulet sign, which in Cypriote has the sound *Ra*, and with a tree in front. The second on a deer (*Dara*), with the same sign and two stars. The third with star and amulet on a lion (*Mu*). On the fourth side two bull-headed satyrs support the tree of life with the winged sun above. This seal is from Asia Minor.

No. 6 (same work, p. 773, Fig. 386) represents five deities and five animals under them, with various hieroglyphs clearly Altaic. The first to the right seems to be a goddess, facing the right, and holding the lituus. Her emblem is a dove. The second, also facing to the right, seems to be a goddess. She holds a flower, and stands above a lion; before her is a hieroglyph common at Jerablus, which resembles the cuneiform *Da*.¹ The third deity is male, and faces to the left. He has the wings and tail of a bird, a tiara, a cross in the left hand (on the impression), and flail in the right. His emblem before him seems to be an altar. The animal below is a hare (the moon).² The fourth deity also, with bare legs, and presumably male, is possibly a Janus with two faces. He wears the horned cap of Ea or Dara, and holds a tree. In front of him is a snake, and the lucky hand, so common at Carthage and all over Asia. His animal is the deer (*Tar* or *Dara*). The fifth deity faces to the right, and holds a sceptre. He is short-skirted, ram-headed, and with wings. In front of him is a flying bird (*Zi*), and behind him what may be a fish (*Kha*). Beneath him is the long-tailed bird (*see back*, No. 1) holding a twig in its beak. In his right hand (on the impression) he seems to hold the *Ankh*, or emblem of life. These five gods perhaps answer to the five deities whose emblems accompany the portraits of Assyrian kings, answering roughly to Venus, Juno, Lunus, Neptune, and Jupiter, or perhaps to the five propitious planets excluding the malifics (Mercury and Saturn). Whatever their precise character, we see that there were in Lydia (for this cylinder comes from Aidin), five gods whose emblems were the dove, the lion, the hare, the deer, and the eagle, to which we are able to add (*see back*, No. 5) a god who stood on a horse or ass.³ These remarks clear the way for the

¹ Behind her head seems to occur the Cypriotic emblem, *Mu*. She may, therefore, be the "Mother" goddess, always distinguished from the Venus of Asia, whose emblem was the dove.

² The hare represents the moon among Mongols. In China the sun and moon are called "the Golden Crow and the Jade Rabbit."

³ The ass is a frequent divine emblem in Egypt for the sun, and in Cappadocia the ass-head occurs with the sign of deity (compare the Myth of Midas and the Median holy ass in the sea). Mr. Greville Chester has a cylinder with a lion having beside it a well-marked ass-head. At Malthai we find deities sup-

description of the three cylinders in the British Museum, casts of which have kindly been sent to me by Mr. Pinches.

No. 7 (British Museum Catalogue, p. 136, No. 52).—On the left two bull-headed genii, with the sun-moon emblem (“brightness”) above.¹ It is remarkable that the sun is marked in this case with a cross or wheel, as on the Jerabis stones. Beneath is the head of a deer with branching horns. These genii are the same as on No. 5.² To the right a deity in a mitre with the bird (*Zi*) as his emblem. Then another similar figure facing him in the same head-dress, between them an antelope’s head, and the hand raised and open. This last emblem, which is so common at



Carthage, and which, in all countries, is a sign of good luck, occurs with the bird (*Zi*) on a cylinder published by Dr. Wright from Lajard (“Culte de Mithra,” pl. xxiii, fig. 13). The last figure to the right is the usual naked goddess, with hands raised to her breasts, as at Karkemish, Troy, &c. Her emblem is a palm branch or plant.⁴

No. 8 (British Museum Catalogue, No. 54).—To the right, a winged god, faced by a figure which seems, perhaps, about to slay a couching bull, which has a hump like the zebu, a third figure with a sword behind, and between these a fleur-de-lis-like object, apparently a form of the amulet *Ra*. The workmanship, with drilled holes for the heads, &c., resembles that of cylinders from Asia Minor.

No. 9 belongs to a large class in the Babylonian collection, perhaps posed to be Assyrian, standing erect on animals, among which the lion, the horse, the deer, the winged bull, and the dog are distinct. The two gods at Bavian stand erect on lions, and this attitude occurs on coins as well as at Pterid in Cappadocia.

¹ This double emblem, sun and moon, seems later to have been replaced by moon and star (as in the modern Turkish flag), which combination is found with a gazelle on coins of Mithradates, King of Pontus (120–63 B.C.), and with a sheep on coins of Antioch.

² On a seal from Youzghâd found by F. G. R. Edwards, Esq., these bull-headed genii flank the winged sun. Other figures of the gods occur on this seal with a tree and a deer’s head.

³ This cylinder represents the sacred tree with goats beneath and the winged sun above, flanked by two figures, with the legend apparently *Zi-An-Sa*, “spirit of heaven favour” (Wright, “Empire of Hittites,” Pl. XX, Fig. 5).

⁴ This plant may show that the goddess is the Babylonian *Zirbanitu*, or “bestower of seed.”

representing a king, or else the sun-god with his emblem—here a winged wheel—above, and with the eagle, the bird with the twig in its mouth,



and a dog, all behind his throne. On the altar in front a deer's head is being sacrificed¹ by two suppliants. A monkey sits by the altar.² The lion and the moon above we have already seen to be emblems of two goddesses. In the hand of the further suppliant is the head of an ass, either a sacrifice or an emblem of the ass-deity, like the two other emblems in the same line. Clemens Alexandrinus (Cohortatio II) says the Scythians sacrificed the ass to Phœbus. Strabo (xv, II, 14) says it was sacrificed to Mars.

These nine cylinders, and the three others mentioned in the notes, appear all to be of Altaic origin, but it is remarkable how similar is the character of the Babylonian examples when compared with those from Lydia and Tarsus.

The symbolism of many described in the British Museum Catalogue is much the same. In one class we have a sort of Perseus and Andromeda group, the male figure treading on a dragon, the female naked. In another (No. 5) Martu, Son of Heaven, wears a horned cap, and is accompanied by an ibex. The Chaldean Hercules, and his friend, the bull-headed satyr, Eabani, are represented slaying the winged bull, or rending the lion. An ibex also accompanies Eabani. On a Phœnician cylinder (No. 21) El subdues the gryphon and a winged man-headed bull. The deity with the axe³ or hammer, found at Bôghaz Keui, and also in Etruria, where he was called Puphluns, occurs on a Cyprian cylinder

¹ Among the Khitai, &c., the deer was sacrificed in honour of the sky. The club held by this deity recalls the clubs of the figures at Merash, Bôghaz Keui, &c., on Altaic monuments.

² The monkey (of which I have only observed one other instance) is sitting under the moon. Perhaps we should compare the Egyptian ape with the moon on its head. The monkey figures in Indian mythology, but it is curious to find it in Western Asia. There are well-known representations, however, of apes and monkeys brought as tribute to Assyria.

³ This weapon recalls the *Ai Balta*, "axe" (or hammer) "of honor," used by the Tartars in Bactria. Charun, the "black god" of Etruria, often carries it. It is also carried by a figure on coins of Idrieus, King of Caria, in 353-344 B.C., of his predecessor, Mausolus (377-353 B.C.), of his successor, Pixodarus (340-335 B.C.), and on a coin of the Carian city Mylassa the hammer also appears. We have a well-known figure of a horned god (apparently Rimmon) holding the lightning in one hand and an axe in the other.

(No. 46) with the sacred tree, gryphons, and gazelles and fish. The dog, ibex, goat, and gryphons, with a ravenous animal attacking a deer, occur on another (No. 47).¹ The ibex, bird, monkey, and lion, occur on another of doubtful class (No. 48). The sun-god and moon-goddess, on another, are accompanied by fish-goats, Capricornus (No. 55), while a human sacrifice is offered them, probably for rain in the 10th (older 9th) or autumn month of Capricornus.²

From these notes, to which many others may be added illustrative of these mythological cylinders, we gather the following facts:—

1. The general character and subject of the cylinder charms is the same in Babylonia, in Phœnicia, and in Asia Minor and Cyprus, though the characters used in writing distinguish the different classes in some instances. The curly-toed boots are not distinctive geographically. The presence of the same Turanian race in all these districts explains the connection in art and symbolism very simply.³

2. In Asia Minor at least eight deities may be distinguished, viz., A. *Istar*, the naked Venus connected with the moon and the dove. B. *Nana*, or *Ma*, the mother-goddess (earth) standing on the lion. C. The lion-headed god, holding a fawn or some other animal, accompanied by the head of a rabbit or of a hare (Babylonian *Sin*)—in other cases, a god stands on a hare. D. The ram-headed god with a bird (*Zi*). E. The bull-headed or horned god, accompanied by a serpent (*Ea*, *Esmun*, or *Martu*), whose emblem seems to be the deer (*Dara*). F. The sun-god, with wings and tail of an eagle (*Tumzi*, or *Ud*). G. The eagle-headed deity (*Nisroch*). H. The deity, ass-headed, or riding on an ass⁴ (*Set*, or Bacchus).

¹ A Cyprian seal, with Cypriot text, shows a gryphon attacking a deer. Compare the common group of the lion slaying a bull. This latter appears to be mentioned by Hellanicos (whom Josephus notices, Ant. i, 4-9) as representing water and earth, though this may be a late explanation.

² In confirmation of this suggestion of human sacrifice in time of drought may be quoted the Phœnician legend of El sacrificing his son in time of danger, and the well-known Babylonian text, "when the weather is fine . . . on the high place the son is sacrificed."

³ Jade, though rare, is found in use in Mesopotamia. This jade must have come from Eastern Turkestan. It is found also in Switzerland. Jade has always been much prized by the Turanians, and is so still by the Chinese. It may be to the Turanians of Italy, not to Aryans, that its introduction into Europe is to be ascribed.

⁴ The ass-headed god is shown by Rawlinson in his "Ancient Monarchies," and was known to the Gnostics. In Egypt, Set, Typhon, and Osiris are symbolised by the ass. In classic mythology the ass carries Bacchus and Silenus, and Priapus is also connected with the ass. In India the ass belongs to Yama, beneath the earth. In the Zendavesta the "three-legged ass" with one horn stands in the sea (Bundahish, ch. XIX). The ass was often sacrificed to Typhon and other deities, and there is no end to the mythology of this animal.

In addition to these, the sacred tree, the scarab, the winged horse, the gryphon, the man-bull, the sphynx, the cross, the *ankh*, and the lion-headed demons with eagle's feet and long ears, all appear to be common to the Babylonians, Phœnicians, Cyprians, Hittites, and other dwellers in Chaldea, Syria, and Asia Minor, and, in most cases, these symbols occur also in Etruria.

C. R. C.

CHINESE AND HITTITE.

THE supposition that Chinese civilisation is connected with the old Turanian civilisation of Western Asia is by no means a recent theory. Lenormant in his "Manual" in 1868 (French edit. vol. i, p. 401), suggested that Chinese writing was derived from Akkadian hieroglyphics, and others have endeavoured to trace the connection.

The Rev. J. Edkins has written, since 1871 onwards, on the comparison of China and Babylonia, in writing, in astronomy, in the erection of observatories, in government, and in certain superstitions. In 1868, the Rev. J. Chalmers wrote on the same subject, and Professor R. K. Douglas has compared Chinese and Western myths. Mr. Hyde Clarke and Professor T. de Lacouperie have added to these comparisons, and the similarities of legend, language, religion and custom, dress and graphic ideas, must indeed strike any student of the Chinese who is acquainted with the west of Asia.

Nor is there any difficulty in accounting for such points of contact considering what is known of the early history of the Chinese.¹

The Bak tribes (commonly called the "hundred families") came from the north-west, and entered the "flowery land," it is supposed, as early as 2300 B.C. Their language, in both grammar and words, presents numerous affinities to the Akkadian; and even in the modern Cantonese, which, according to Chalmers, preserves archaic terminations, I find about 100 words almost identical with Akkadian monosyllabic words, which agrees with Professor Max Muller's views as to Chinese.

The traditional number of hieroglyphics possessed by these immigrants from Central Asia was 540, including the secondary signs, or combinations of two, or even three, symbols (Lacouperie, "Chinese Civilisation," a lecture published 1880, p. 18). It has been said that this system was directly borrowed from Babylonia, but there are several objections to such a theory. The Chinese numerals are not like those of the cuneiform system (above three), the writing is in vertical lines, not from left to right as among Semitic writers of cuneiform; the compound emblems bear no relation to the compounds of the cuneiform.

The comparisons of Chinese and cuneiform, which I find possible in fifty or sixty cases, connect the Chinese with the very oldest Akkadian symbols which stand erect, and are written vertically for the word, and from right to left for the text. The sound, as well as the sense, is often

¹ See Professor T. de Lacouperie's new volume, "Languages of China before the Chinese," 1887.

the same, but since Chinese is a language of roots, not an agglutinative tongue, the comparison remains chiefly ideographic, and only serves to indicate a common (and very remotely common) origin rather than a direct literary borrowing. Some of the resemblances, such as the emblems for king, for fire, for white, for measure, for field, for twins, for storm, for bush, for wind, and for bondage, are, however, very remarkable, and can hardly be supposed due to independent origin. In all, I have noted sixty cases, comparing the Shwoh-wan with the oldest Turanian emblems of Tell Loh.

The great difficulty in such study lies in the corruption of both Chinese and cuneiform emblems through long use and graphic decay. Thus the Shwoh-wan (*see* Chalmer's translation) only dates back to about the Christian era; and even the earlier Ku-wen writing is said not to be traceable before 900 B.C.—a time when the cuneiform was already a decadent system.

The Chinese having ceased to remember the original derivation of the majority of their emblems, introduced fanciful explanations, like those once supposed to explain the origin of square Hebrew; and it seems that they even modified their forms according to their theories. A large proportion of emblems have thus become unrecognisable. Many, like the ape, the horse, the tortoise, the elephant, did not belong to the systems of Western Asia. Some which have retained their form yet, in recognisable outline, are, however, of great interest as showing the graphic ideas of Turanian picture writing; and thus serving to throw light on the ideographic value of older emblems.

Comparing the commoner Altaic—or so-called Hittite—with the Chinese emblems of which the antiquity and meaning is undoubted, I find, in all, some fifty possible comparisons, some of which serve to throw light on the values of the Hittite. Thus the Hittite *Zi* or *Zo* is very like the Chinese common phonetic for air or vapour, agreeing with the value which I have proposed from the Akkadian for the Hittite. The jar which in Hittite appears to have the value *Pa* or *Be*, comparing the Cypriote *Pe* and the Akkadian *Bi*, for a liquid receptacle, is like the Chinese *fiu*, a jar, used both as a radical (or ideogram) and as a phonetic. It seems to me, indeed, that the two classes of Chinese emblems called keys and phonetics (that is, emblems used in one case for picture value, in the other for sound value) answer in each of the fifty cases to the corresponding two classes of the Hittite, viz., the larger emblems used as pictures, and the smaller attached emblems used for sound only, as phonetics. Several of the comparisons may be erroneous, but they are numerous enough to make it appear probable that the Chinese and Hittite systems sprang from a common original system, which is, of course, more closely represented by the archaic Hittite than by the Chinese, even of 2,000 years ago.¹

¹ See "Structure of Chinese Characters," by John Chalmers, M.A., LL.D., 1882, a copy of which translation of the Shwoh-Wan has kindly been lent to me by Lieutenant Mills, R.E.

Yet later in entering China from the north and north-west, were the Khitai from Mongolia, whose name originates the mediæval term Cathay. The Chinese travellers of the 13th century speak of the Khitai as formerly inhabiting the country east of the Aral Sea. Mr. Howarth's interesting account of the Khitai (J. R. A. S. xiii, 2) shows that this Tartar-Mongol people were in many respects very like the Kheta of the Egyptian monuments. Some words of their language preserve almost unchanged the old Akkadian sounds. They were great charioteers and bowmen, and they adored earth, sky, sun, and moon, and the sacred mountain, as the Huns and the Etruscans did also, and as the Hittites are shown to have done from their treaty with Rameses. Like other Mongolian and Tartar peoples, they had a rich mythology. They were able to work metals as the Akkadians did from the earliest times, and as even the Turkomans still do ; and they had cities and palaces.

The royal names and titles of the Khitai also recall those of the inhabitants of Asia Minor and Syria mentioned on the monuments. The King was called *Kha-Khan* (as among Persians and Khozars)—perhaps the real rendering of the Medic double emblem for King. *Khopi*, *Kuku* (compare the Medic *Khupa* and the common Turanian word *Kuk*, for "superior") ; *Tulai* (compare *Tulia*, chief of the *Kue*) ; *Taishi* (from a Tartar root, meaning "to fight," whence *Tis Tassi* and *Tassak*, "hero," in Akkadian), are interesting names of Khitan chiefs. The meaning of the name Khitai is unfortunately obscure.

A great deal of light may be obtained from a study of the Turkic and Mongol history in illustrating the scattered fragments of information which we possess concerning the early Turanians of Chaldea and of Syria. In the folk lore of the Kirghiz, the Kalmuks,¹ and the Mongols, many of the old myths of the cuneiform tablets and Greek mythology remain but little changed.

The remaining words of the Carian language are easily explained by comparison with Turko-Tartar or Ugrian living words.

The curious non-Aryan inscriptions of Lemnos, which serve to connect the Etruscans with the shores of Greece and of Asia Minor, present us with a language evidently of the same class. Even among the Scythian Amazons of Herodotus we recognise the roots of the Akkadian language in words of which he gives the translation, and the similarities of Egyptian fairy stories written in the 14th century B.C., when they are compared with the legends of Central Asia, are so striking as to leave very little doubt as to their Turanian derivation.

The same study also enables us to understand Phœnician antiquity

¹ Take, for instance, the legend of King Midas, who had asses' ears. It occurs in a collection of Mongol tales, and the Kirghiz relate it in connection with Lake Issyk Kul. According to Herodotus, Midas was the first Phrygian King, and the Phrygians were apparently Turanians. Mita, King of the Moschi, is mentioned in a cuneiform text. On the Hittite monument a cap with ears like that invented for Midas is represented.

much more completely, as I have attempted to show elsewhere,¹ and without doubt some of those names of Greek deities and heroes which are not explicable as either Aryan or Semitic, may be easily understood if regarded as of Pelasgic or Turanian origin. Among these I would reckon Herakles, or Herce (Etruscan), a word not explained by any Aryan etymology, but probably the Akkadian Er-gal (mentioned on a tablet), or "great man." The name Amazon may also be supposed to mean Ama-zun, or "female warrior;" while Eshmun and Silek, the Phœnician deities, may be Es-mun, "the good deity," and Sil-ik, "the bright one."²

The names of chiefs of various Asia Minor tribes from 1130 to 650 B.C., which have been found on the monuments and collected by Professor Sayce, present us with many clearly Turkic words, and with names or terminations also found in the Greco-Carian inscriptions. Thus Uricci, chief of the Kue, has a name comparable with the Tartar *örögi*, or "high." Burunate, the Yazbukian, may be compared with the Usbek word *Baranta*, for a "foray" or "raid." Menuas, King of Van, recalls the mythical giant *Manias*, the ancestor of the Kirghiz. Kalabôtēs, the Carian, has a name meaning "great hero" in Tartar dialects, where the word *Batis* survives, and is, perhaps, the Akkadian *Patesi*.

These are but a few instances out of very many in which the Akkadian and the living Turko-Tartar languages give a simple explanation of local and personal names. The Carian word *Kōs* (*Kōn*), for sheep, recalls the Turkish قوز "lamb," and قویون "sheep," which among the Kirghiz becomes *Koi*; and the Carian *τὰπα* for a rock is clearly the Turkish تپه and the Turkoman *Tapa*, a well-known word for a hill. I believe that every known Carian word can be so explained, and the Carians are connected with the Hittites (by their syllabary) and with the Etruscans, according to classic tradition. The explanation of local names in Asia Minor occurring in Greek literature is equally satisfactory when comparison is made with the common geographical names of Central Asia. Thus, the termination *Der*, or *Dar*, in river names, is evidently illustrated by the Turkish دره "valley," and the Central Asian *Daria*, for "river." The importance of a study of Altaic languages for the elucidation of the antiquities of West Asia, Greece, and Italy, as well as of Egypt, can hardly be overstated.

C. R. C.

¹ "Archæological Review," April, 1888.

² The name, Centaur (or Gandharva, according to Kuhn's comparison), has no good Aryan explanation. As a Turanian (Ugrie) word it would mean "man-beast" (Gan-tōra). The word Gorgon in like manner comes from a root meaning "terror."

ERRATUM.

In *Quarterly Statement*, July, 1888, p. 163, I see the words "The beech is found all over the north of Asia." The word *Minor* is omitted by error. The beech grows on Mount Parnassus and in the Caucasus.

C. R. C.

"THE SPEECH OF LYCAONIA."

(Acts xiv, 11).

It is generally supposed that the language of Lycaonia may have been one of the old dialects of Asia Minor, akin to those of the Non-Aryans. For this reason it is interesting to consider the few words of Carian, Lydian, Phrygian, Cilician, and other Asia Minor dialects preserved for us in classic authors. Lycaonia lay close to Cilicia, west of Cappadocia, east of Phrygia, Caria, and Lydia.

The following are Carian words (see "Trans. Bib. Arch. Soc.," ix, 1).

1. *Ala*, a horse. Compare Hungarian *lo*, "horse," Chinese *lu*, "ass," Turko-Tartar *at*, "horse." The *t* and *l* are often interchanged in Altaic speech.

2. *Banda*, "victory." Compare *Banda* in the Malamir texts, where it seems to mean "strong."

3. *Glous*, "robber." The root *Kulu* in Mongolian (Buriat) means "to steal;" the common personal ending in *s* is here added.

4. *Kakkabe*, "a horse's head." The second part may be compared with the Esthonian *lobu* and Ostiak *kopta*, "horse," the first is perhaps *Ka*, "face" (as in Akkadian), or *Kak*, "top." Compare *sak*, "head," "top" in Akkadian and in Ugric speech.

5. *Kōs*, "sheep." Turkish *Kozi*, "lamb," Mongol *Khosa*, "ram," Kirghiz *Koi*, "sheep."

6. *Taba*, "rock." Zirianian *tiip*, "rock," Turkic *tapa*, a "hillock."

7. *Soua*, "tomb." Probably the Etruscan *Suthi*, "tomb," as suggested by Dr. Isaac Taylor.

8. *Thumnia*, "rod." Probably the Ugric root *tumb*, to "strike."

9. *Toussuloi*, "dwarfs." The latter part is perhaps the Akkadian *lu*, "man," Mongol *ulut*, "mankind," or "men;" *tus* appears, perhaps, in the Tartar *tusuk*, "low." The word has, however, been compared by Ellis with the Ossetic *tyusul*, Armenian *doyn*, "little." That it is to be divided is shown by the next.

10. *Kattouza*, a Thracian town of dwarfs (Prof. Sayce). *Kat* is the Medic *Kat*, "place," from a root which is common to Aryan and Turanian speech, meaning a house or shelter; *Touz* is "short," as above.

Lydian Words.

Many words given as Lydian are Aryan, and throughout Asia Minor a similar mixture of vocabularies exists—as in Armenian and Georgian.

1. *Attalos*, "cessation." Compare the Akkadian *Tillas*, "complete," from the root *Til*, "full," which occurs in Ugric speech.

2. *Kandaules*, said to mean "dog choker"—perhaps from the old savage sacrifice of tearing a dog. Perhaps we should compare the Chinese *Chuan* for "dog," and the Tartar root *Tol*, "to twist."

3. *Lailas*, a "tyrant." Compare the Akkadian *Lala*, "ruler," Hittite *Lel*, Hunnic *Luli*, "chief."

4. *Sardin*, "year." Compare the Mongol *Zil*, Turkish *Sal*, "year," Medic *Sarak*, "time," Buriat *Sara*, "month."

5. *Targanon*, "branch." The nearest seems to be the Esthonian *türkan*, "to sprout forth."

6. *Mōos*, "the earth." In Vogul *ma* is "earth." Compare also the Sanskrit *Mahi*, the Akkadian *Ma*, Finnic *Maa*, Zirianian *Mu* (Hittite *Me*).

*Phrygian Words.*¹

1. *Papa*, said to be a Phrygian god (Hippolytus), evidently means "father." Turkish *baba*, Mongol *babe*, Akkadian *Abba*.

2. *Ate*, *Atys*, Phrygian deity. Turkish *At*, Tartar *ata*, Medic and Akkadian *adla*, "father," "elder."

3. *Bekos*, "bread"—has been compared with *φαγεω*, "to eat."

Scythian Words.

These I find in Herodotus, who translates them.

1. *Aior*, "men." Compare the Akkadian *eri*, *uru*, "man," Turko-Tartar *er*, Mongol (Buriat) *ere*.

2. *Pata*, "slaying." Akkadian *Bat*, "slay." This is also an Aryan root *pat*.²

3. *Papæus*, Jupiter. Compare the Phrygian *Papa*.

4. *Asehy*, a drink. Compare the Tartar strong liquor called *Shauju*.

5. *Apia*, "the earth." Compare the Georgian *obai*, "country," and the Tartar *ab*, *ob*, for an abode in every sense. Akkadian *ab*, "abode."

6. *Oetosyrus*, Apollo. Compare the Mongol *ud*, Akkadian *ud*, Turkish *udun* for "day;" and Akkadian *Sir*, Mongol *Sar*, "light." Apollo being the Sun God, or "day-light."

We have here more than two dozen words referable to Turanian languages nearer to the Ugric on the west, in Lydia and Caria, and to the Tartar further east. Many more might be added from the ancient nomenclature of Asia Minor, but these may serve to show that in St. Paul's time the country was occupied by the same populations still found in Turkey and in Anatolia.

C. R. CONDER.

¹ The Cilician words are mainly names of deities, including *Ma* ("the earth" ?), whose high priest was called the Abakles, probably *Aba Kal-s*, "great priest." Compare the Buriat *Bo*, "priest." Akkadian *Aba*, rendered a "judge," Medic *Ibba*, "to judge," and perhaps the Malamir *Bukhu*, "priest" (Tartar *baksi*), while *Kal* (Akkadian *Gal*) is a common word for "great."

² The Scythians called the Amazons *Aiorpata*, or "men slayers."

ON COMPARISONS OF HIEROGLYPHICS.

THE idea of comparing the emblems of the four ancient hieroglyphic systems is not a new one. I endeavoured in 1883 to compare Hittite and Egyptian. In 1880 Prof. T. de Laouperie compared a few Chinese and Cuneiform emblems, and has added other such comparisons in 1888. An excellent paper on the subject was published by the Royal Asiatic Society in 1887, written by Mr. G. Bertin.

The accompanying figures represent many new results in detail, and, as far as I know, the Hittite and Chinese have never been compared before.

Whether these four systems developed from one original system of rude picture-writing, or whether—as some urge—they are independent, it is still useful to compare them, especially as we may thus obtain meanings for Hittite signs. But until it is proved that the grammatical signs (pronouns, particles, &c.) are the same in two systems, it cannot be said that the connection is other than remote. I find on studying the systems in detail that there was no very close connection. Neither of the four systems can be said to be borrowed from the other. They are perhaps radiating developments from one centre. The Hittite seems to be the oldest, for several reasons: 1st, because it is less developed, having no included emblems, and few signs; 2nd, because the forms are less conventionalised; 3rd, because it has apparently no determinatives.

PLATE I.

The Cuneiform emblems (second columns) are taken from Amiaud's decipherment of the Akkadian texts at Tell Lo (*circa* 2500 B.C.). The Hittite sounds are obtained from Cypriote as already published.

No. 1. Hittite *An*, Cuneiform *An*, "God"—a star (*see* No. 31, Plate II).

No. 2. Cuneiform *Si*, eye. Hittite probably *Is*, *si*, or *an* (*see* No. 2, Plate II, No. 4, Plate III, No. 1, Plate IV).

No. 3. Hittite *me*, Cuneiform plural sign (*see* No. 29, Plate II, No. 36, Plate IV).

No. 4. Hittite *Kon*, Cuneiform *Nun* "prince" (*see* No. 2, Plate IV).

No. 5. Cuneiform *En*, "Lord" (*see* No. 14, Plate IV).

No. 6. Cuneiform *Ma*, "ship" (*see* No. 3, Plate III).

No. 7. Cuneiform *Bara*, "altar" (*see* No. 19, Plate III).

No. 8. Hittite probably *Ke*. Cuneiform *ik*, "open" (*see* No. 8, Plate III, and No. 18, Plate IV).

No. 9. Hittite *Ku*, Cuneiform *Aka*, "high," the royal cap.

No. 10. Hittite perhaps *Te*. Cuneiform *Da*, the hand raised (*see* No. 18, Plate II).

No. 11. Cuneiform *du*, "go," "become" (*see* No. 15, Plate II).

No. 12. Cuneiform *du*, "go" (*see* No. 15, Plate II, No. 30, Plate III).

No. 13. Cuneiform *su*, "hand" (*see* No. 1, Plate II, No. 7, Plate III).

HITTITE.

AKKADIAN.

HITTITE.

AKKADIAN.

1			20		
2			21		
3			22		
4			23		
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17			36		
18			37		
19					

No. 14. Hittite probably *To*, Cuneiform *Tuk* and *du*, "have" (*see* No. 5, Plate II, No. 29, Plate III).

No. 15. Hittite *Dim*, Cuneiform *Dim*.

No. 16. Hittite, probably *Tam*, Cuneiform *Tam* or *ud*, "the day," or "sun" (*see* No. 24, Plate II, No. 23, Plate III).

No. 17. Hittite *Me*, "country," Cuneiform *Mat* and *Kur*, "country" (*see* No. 6, Plate II, No. 5, Plate III).

No. 18. Cuneiform *Tur*, "abide," "rest" (*see* No. 28, Plate II).

No. 19. Hittite *No* or *Mu*, Cuneiform *bab*, "oppose" (*see* No. 26, Plate II, No. 39, Plate III).

No. 20. Hittite, probably *Pu*, Cuneiform *Pu*, "long," apparently a flower-bud (*see* No. 13, Plate IV).

No. 21. Hittite *Mo*, Cuneiform *Muk*, "female" (*see* No. 33, Plate II).

No. 22. Hittite *O* or *Pa*, Cuneiform *U*, "superior," supposed to represent the firmament (*see* No. 16, Plate II, No. 34, Plate III).

No. 23. Hittite *Re*, Cuneiform *Mi*, "dark," supposed to represent rain (*see* No. 17, Plate II, No. 24, Plate III).

No. 24. Hittite *Tar*, *Tarka*, Cuneiform *Lul*, "chief" (also "stag" in Akkadian). *Dara*, and probably *Turakhu*, is another Akkadian word for deer. *Tarka* is Turkic and Mongol for "chief" (*see* No. 23, Plate II). The stag's head stands for *Tarka* "chief" on the Hittite bilingual.

No. 25. Hittite *Lu*, *Le*, Cuneiform *Lā*, "yoke."

No. 26. Hittite *Ze*, *Zo*, Cuneiform *Zi*, "spirit" (*see* No. 28, Plate III).

No. 27. Cuneiform *Kar*, "enclosure" (*see* No. 11, Plate II, No. 31, Plate III).

No. 28. Hittite, apparently *lo*, Cuneiform *bar*.

No. 29. Hittite *Le*, Cuneiform *Le* or *Lu*, "bull." The bull's head occurs also in Egyptian inscriptions.

No. 30. Cuneiform *Lig*, "dog." The Hittite may be a dog or a lion.

No. 31. Cuneiform *Lu*, "sheep."

No. 32. Hittite *Te*, Cuneiform *Pa*— apparently "flower" or "herb" (*see* No. 10, Plate II, No. 32, Plate III, No. 8, Plate IV).

No. 33. Cuneiform *Sar*, apparently the sacred tree, commonly shown on the monuments.

No. 34. Cuneiform determinative for "beast."

No. 35. Hittite *Ti*, Cuneiform *Ti*.

No. 36. Cuneiform *Dib*, "tablet."

No. 37. Hittite *Ri* (and *Bi*), Cuneiform *Ri*. In both systems it occurs as the name of a deity.

PLATE II.

The Egyptian emblems (in the second column) are taken from Pierret's "Vocabulary," and in many cases occur also in Renouf's Grammar. For the most part they are used simply as determinatives, or pictures showing the *class* of the word they accompany, and as such are very common.

No. 1. The Egyptian is used for the letter *t*, and for "hand."

No. 2. Egyptian determinative for *eye*, with the words *sai* and *an*.

No. 3. The Egyptian is a pot used for the word *nut* and for letter *n*, and attached to the words *a*, "wash," *aaa*, "vase." The sound in Hittite is also *a*, from *α*, "water."

No. 4. Hittite and Egyptian royal cap.

No. 5. Egyptian determinative for "touch," "give" (*see back*, No. 14, Plate I).

No. 6. Egyptian determinative for countries. Hittite *me*, "country."

No. 7. Hittite *ga* or *ka*. Egyptian *hik* and *u*.

No. 8. Hittite *sa*. Egyptian determinative for the word "sickle;" also used for letter *m*.

No. 9. Hittite *Ta* ("beat"). Egyptian determinative for "words implying strength" (Renouf). It accompanies the Egyptian word *ta*, "to strike." (In Chinese also *ta* means "beat.")

No. 10. Hittite *Te*. Egyptian determinative of plants (Renouf).

No. 11. Egyptian determinative for house, accompanies the word *i*, "house."

No. 12. Egyptian determinative for ship.

No. 13. Egyptian determinative for "all actions performed by the mouth, such as eating, drinking, speaking" (Renouf). Hittite, probably *En* or *Ni* ("prayer" in Akkadian; *Medic Na*, "speak").

No. 14. Egyptian determinative for head, top, or front.

No. 15. Egyptian determinative for "words implying motion" (Renouf). The single leg stands for "walk," "climb," &c. (Pierret).

No. 16. Egyptian emblem for heaven (*Pe* and *Pet*). (*See back*, No. 22, Plate I.)

No. 17. Hittite *Re*. Egyptian determinative for sky, rain, air.

No. 18. Hittite, probably *Te*. Egyptian determinative for "give."

No. 19. Egyptian determinative for "twins" and "brotherly union" Pierret, "Vocab.," pp. 386, 510).

No. 20. The Egyptian emblem of the rising sun (Renouf).

No. 21. Egyptian emblems for "Isis," "throne," &c.

No. 22. Egyptian emblem for "monument."

No. 23. In Hittite Tarka, in Egyptian *hik*, both used to mean "chief" (*see back*, No. 24, Plate I).

No. 24. Egyptian emblem for "sun," "day," &c.











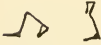

No. 25. The second Egyptian emblem accompanies the words *sau*, *sa*, "cut."

No. 26. The Egyptian determinative for things, "contrary."

No. 27. The Egyptian determinative for "flowing" (*e.g.*, "blood," "wound," &c.).

No. 28. The Egyptian emblem of "stability" (*see back*, No. 18 Plate I).

No. 29. The Egyptian plural (Renouf). The Hittite emblem is also a plural with sound *Me*.

HITTITE.	EGYPTIAN.	HITTITE.	EGYPTIAN.
1 		19 	
2 		20 	
3 		21 	
4 		22 	
5 		23 	
6 		24 	
7 		25 	
8 		26 	
9 		27 	
10 		28 	
11 		29 	
12 		30 	
13 		31 	
14 		32 	
15 		33 	
16 		34 	
17 		35 	
18 			

AKKADIAN.

CHINESE.

AKKADIAN.

CHINESE.

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No. 30. The Hittite emblem occurs as the name of a deity. The Egyptian stands for "day" (Pierret, "Vocab.," p. 152).

No. 31. Egyptian emblem for "star" or "god," &c. (*see back*, No. 1, Plate I).

No. 32. The Egyptian emblem of life. The Hittite *Ra*, apparently meaning "power." It is also suspended to the necklet of Assyrian kings.

No. 33. The Egyptian emblem accompanies the word *Mat*, "mother" (*see back*, No. 21, Plate I).

No. 34. Hittite, probably *Ti*. Egyptian has the sound *aa*, and is comparatively rare.

No. 35. The Egyptian determinative for pyramid, tomb; monument, &c. (Pierret.)

This comparison is purely ideographic, as Egyptian and Hittite are not of the same group of languages; but out of about 70 common determinatives used in Egyptian 33 have here been compared with Hittite emblems. Other emblems, such as the bull's head, the eagle, the lion, the serpent, the corn ear, the altar, &c., might be added, but are less interesting.

PLATE III.

The cuneiform to the left is taken, as before, from the Tell Lo monuments. The Chinese is copied from the ancient *Seal* character, which occurs on monuments in 827-782 B.C. (*see J. R. A. S.*, North China Branch, 1874, p. 133), and is given by Dr. Chalmers ("Structure of Chinese Characters," 1882) with the Cantonese sounds, representing one of the oldest Chinese dialects ("Eitel Cantonese Dict.," 1877, p. xii). Of the 39 emblems compared, the first 10 are given by Prof. T. de Lacouperie in his recent paper on this comparison (1888). He gives about 30 in all, but I have omitted those which seem to me doubtful on various accounts, and the remaining 29 are, as far as I know, new suggestions.

No. 1. Cuneiform *Khu* determinative for "bird," and *Nam*, for "swallow" (as the latter is explained by Mr. Houghton). Chinese *chiu* for a short-tailed bird, and *tiu* for a long-tailed bird (Chalmers). Prof. de Lacouperie compares *Khu* with *tiu*.

No. 2. Cuneiform *tur*, "son." Chinese *ma*, "twins." Prof. de Lacouperie compares *Tur* with *tok*, "son," which has only one, instead of two emblems.

No. 3. Cuneiform *Ma*, "ship." Chinese *Chau*, "a boat." The second Chinese emblem is not in Chalmers.

No. 4. Cuneiform *Si*, "eye." Chinese *muk*, "eye."

No. 5. Cuneiform *Kur*, "mountains." Chinese *shan*, "mountains."

No. 6. Cuneiform *Gut* (and *lu*) "bull." Chinese *ngo*, "bull."

No. 7. Cuneiform *Su*, "hand." Chinese *tsu*, "left hand" (Chalmers, No. 37), *shau* or *seu*, "the hands" (No. 113). Prof. de Lacouperie gives the second.

No. 8. Cuneiform *Ik*, "open." Chinese *ku*, "door."

No. 9. Cuneiform *Ban*, "bow." Chinese *kung*, "bow."

No. 10. Cuneiform *du*, "go." Chinese *to* (or *tsuuk*), "foot."

The additions which I propose are—

No. 11. Cuneiform *us*, "man." Chinese *tai*. This is purely a pictorial comparison.

No. 12. Cuneiform *zir*, "light." Chinese *pak*, "white."

No. 13. Cuneiform *ti*, Chinese *chih*, "arrow" (see No. 22, Plate IV).

No. 14. Cuneiform *nun*, "prince." Chinese *wong*, "king." Compare the Akkadian *uwan*, "prince."

No. 15. Cuneiform *i*, "pure," representing, perhaps, rain. Chinese *chun*, "stream."

No. 16. Cuneiform *Ra*, "irrigate"—a field and water channel. Chinese *tin*, "a field." The relation, like the preceding, is purely pictorial.

No. 17. Cuneiform *Ne*, "fire." Chinese *im* (and *yen*) "flame."

No. 18. Cuneiform *ga*, "staff," apparently a reed. Chinese *tün*, a "young plant."

No. 19. Cuneiform *bar*, "altar." Chinese *tsü* "altar."

No. 20. Cuneiform *sana* and *se*, "corn." Chinese *shang*, "growth."

No. 21. Cuneiform *tir*, "jungle." Chinese *chok*, "bush."

No. 22. Cuneiform *tar*, "divide." Chinese *a*, "forked."

No. 23. Cuneiform *ud*, "sun." Chinese *yat*, "sun." (N.B. Mongol *ud*, "day.")

No. 24. Cuneiform *mi*, "dark." Chinese *yü*, "rain."

No. 25. Cuneiform *suk*, "baggage." Chinese *pau*, "bundle."

No. 26. Cuneiform *sa*, "middle." Chinese *chung*, "centre."

No. 27. Cuneiform emblem of plural. Chinese *yam*, "many."

No. 28. Cuneiform *Zi*, "spirit," "breath." Chinese *hi* (or *chi*), "vapour," "breath."

No. 29. Cuneiform *tu*, "have." Chinese *cheung*, "take hold," and *chau*, "clutch."

No. 30. Cuneiform *du*, "go." Chinese *chik*, "step."

No. 31. Cuneiform *Kar*, "enclosure." Chinese *wai*, "enclosure," or "round."

No. 32. Cuneiform *Dur*, "bondage." Chinese *taau*, "prisoner."

No. 33. Cuneiform *Pa* (? "flower"), *Pu* (? "bud"). Chinese *put*, "vegetation," *fung*, "vegetation."

No. 34. Cuneiform *U*, "above." Chinese emblem of heaven and all superior things.

No. 35. Cuneiform *idu*, "month." Chinese *üt*, "month." The words are alike, but the emblems have no resemblance.

No. 36. Cuneiform *Khi* and *Sar*, "a measure," perhaps a vase. Chinese *chze*, "vase," and *fau*, an "earthen jar" (see No. 17, Plate IV).

No. 37. Cuneiform *a*, "hand." Chinese *yau*, "right hand." The sounds are somewhat alike.

No. 38. Cuneiform *As*, a "curse" or "charm;" supposed to mean

HITTITE.

CHINESE.

HITTITE.

CHINESE.



something "bound." Chinese *chak*, representing a "bundle of documents."

No. 39. Cuneiform *bab*, "opposite." Chinese *ng*, used with words for "crossing" and "disaster." (Compare the use of this emblem in Egypt, No. 26, Plate II.)

A few of these comparisons are sufficiently remarkable, though many are only pictorial. The coincidence of sound is only found in a very few cases. The emblems are all common ones in the two systems, but it must not be forgotten that there are many important emblems in the two systems which have no connection, and that the compounds and numerals differ entirely. The connection is remote, and is with the earliest Akkadian emblems, which all stand upright in the line.

PLATE IV.

This comparison of 37 emblems is new, and for the most part it results from the facts gathered in comparing the known systems as given in the preceding tables.

No. 1. Hittite *Si*, *Is*, or *An*, Chinese *muk*, "eye."

No. 2. Hittite *Gon*, Chinese *Kon* and Chinese *wong*, "prince."

No. 3. Hittite *To*, Chinese *chau*, "clutch."

No. 4. Hittite *Se*, Chinese *tso*, "hand."

No. 5. Hittite, perhaps *Te*, Chinese *kwang*, "the arm."

No. 6. Hittite, perhaps "go," "run," Chinese *chik*, "stride."

No. 7. Hittite *Me*, "country." Chinese *shan*, "mountains."

No. 8. Hittite *Te*, Chinese *chit*, "sprout."

No. 9. Hittite *Gu* and *Vo*, Chinese *hau*, "speech."

No. 10. Hittite only once known (J. iii, last line), where the sound is unknown; presents a head with two small arms. Chinese *tsze*, "small," "child," used phonetically and also radically (Chalmers, p. 76).

No. 11. Hittite *U* or *pa*, Chinese emblem of heaven.

No. 12. Hittite *Ze* or *Zo*, Chinese *hi*, "breath."

No. 13. Hittite *pu*, Chinese *put*, "vegetation."

No. 14. Hittite, probably *En* (Khitai *Hain*), "throne," or "lord." Chinese *ün*. Said, however, to mean a "rolling thing."

No. 15. Chinese *tsap*, "collection," apparently "mound."

No. 16. Hittite, probably *Zi* or *Uz*, Chinese *tiu*, "bird."

No. 17. Hittite *Pe*,¹ used phonetically. Chinese *fau*, also used phonetically as well as radically.

No. 18. Hittite, probably *Ke*, Chinese *hu*, "door," a key.

No. 19. Hittite *a*, "water," used phonetically. Chinese *yau*, "jar," used phonetically.

No. 20. Hittite *Ne*, "male," used phonetically. Chinese *lik*, "strength," used phonetically.

¹ Appears in the combination *Sag-pe*, "charm" (J. iii). *Pa*, *Ba*, in Akkadian, *Boi* in Tartar and Mongol, for "incantation." *Sag-ba* means, apparently, "chief charm."

No. 21. Hittite, perhaps *Pi*, Chinese *put*, used for "division."

No. 22. Hittite *tî*, used phonetically. Chinese *ting*, an important phonetic, and *chi*, "arrow."

No. 23. Hittite "flame" (*gi* ?), Chinese *chü*, "flame."

No. 24. Chinese *tu*, "rabbit," the emblem of the moon. In Hittite it is the name of a deity.

No. 25. Chinese *put*, "spread," "trample," used for "send."

No. 26. Chinese *ma*, "twins. (Compare the Egyptian emblem for "twins," No. 19, Plate II.)

No. 27. Chinese *muk*, "tree," is not unlike the Cuneiform *mu*. The Hittite appears to be a fruit tree such as is commonly shown on engraved gems.

No. 28. Hittite *Re*, Chinese *Yü*, "rain" (see No. 23, Plate I ; No. 17, Plate II ; No. 24, Plate III).

No. 29. Bull in each system.

No. 30. Chinese emblem for "contrary" (see No. 19, Plate I ; No. 26, Plate II ; No. 39, Plate III).

No. 31. Hittite *Pa*, Chinese *fung*, "vegetation."

No. 32. Chinese *tu*, "knife," common as a phonetic and also as a radical.

No. 33. Hittite, probably "go," Chinese "foot" (see No. 11, Plate I ; No. 10, Plate III).

No. 34. See what is said of No. 38, Plate III.

No. 35. Hittite, probably the sun, as is the Chinese.

No. 36. Hittite plural, Chinese "many" (see No. 3, Plate I ; No. 29, Plate II).

No. 37. Chinese *fai*, "viper."

These curious comparisons give more instances of similarity of sound than we get in Plate III, but none of the Hittite "weak roots" seem to be represented, and the connection is evidently somewhat remote. In the cases in which an emblem can be traced with the same ideographic meaning in Egyptian, in Cuneiform, and in Chinese it is only natural to suppose that it may have been used in Hittite with the same idea. This is confirmed in such a case as to "have," "take," "touch" by the sound obtainable for the Hittite from the Cypriote.

Thus I think we may conclude¹ that in Hittite, 1, star (*an*), means "God ;" 2, four strokes (*me*), "plural ;" 3, throne (*en*), "majesty ;" 4, foot (*du* ?), "go ;" 5, hand open (*se*), "favour ;" 6, hand grasping (*to*), "have," "take ;" 7, saltire (*no* or *mu*), "opposition ;" 8, firmament (*u*), "that, above ;" 9, zigzag (*zo*), "breath," "wind," "spirit ;" 10, hand with sceptre (*gon*), "rule ;" 11, hand to mouth (*En*), "saying ;" 12, hand with stick

¹ Many of these values I obtained already in 1883 by comparing Egyptian and Hittite (see *Quarterly Statement*). Shortly afterwards Wright's "Empire of the Hittites" was published, and in this Prof. Sayce gives the following values : foot, "go ;" hand grasping, "take ;" firmament, "superiority ;" hand to mouth, "speech." He also first recognised the deer's head for chief, and the emblem for country.

(*ta*), "beat," "cause," or "power;" 13, rain (*re*), "flow," perhaps phonetic; 14, two faces opposed, "twins;" 15, deer's head (*tarka*), "chief;" 16, jar (*pe*), probably phonetic; 17, hare or rabbit, probably the moon; 18, water pot (*a*), "water," and used phonetically; 19, two feet opposed, possibly "send;" 20, a bundle, or scroll, perhaps "charm." These conclusions in many cases seem independently established by other considerations (see my previous paper on the "Hittite Language"), but we obtain several valuable hints by observing the signification of similar emblems in the other systems, and there is at least a possibility that they all really grew out of one primitive picture system which was invented by the Turanians in Asia. Among the most certain Hittite signs we may now enumerate those for "god," "country," "sun," "king," "female," "male," "bull," "lion," "chief" (*Tarka*), "sheep," "tablet," "flame," "have," "go," "house," "spirit," "water," "beat," "grow," "ship," "head," "flow," "majesty," "moon," "life," "power," "word," "tree," "twin," "snake," with the personal pronouns, case endings, plural, verbal ending (*mak*), adjective ending, and negative—as mentioned in my previous paper ("Hittite Language"). The system is ideographic with phonetic additions—or agglutinated particles—but apparently with very few, if any, determinatives, and the signs enumerated above as explicable amount to 60 in all out of 120, including all those most commonly found, the sound being known in 40 cases.

C. R. C.

KIRJATH JEARIM.

By an oversight, which I fear is my fault, on page 113 of the "Names and Places," the claim of the Rev. A. Henderson to the identification of Kirjath Jearim at 'Erma has been left unnoticed. In "Tent Work in Palestine" I proposed Soba, but Mr. Henderson convinced me that the border of Benjamin must have passed far south of the points then supposed to have been long since fixed. In 1881 I revisited 'Erma to ascertain the character of the site, and found (as noted in the Memoirs) that Mr. Henderson's view agreed well with local indications. A reference should be made in future editions to his papers, *Quarterly Statement*, January, 1878, p. 19, October, 1878, pp. 196-8.

C. R. CONDER.

THE CONDUIT NEAR THE POOL OF BETHESDA.

HERR SCHICK, in his account of the Pool of Bethesda, describes the conduit lately discovered on the north of the Birket Israel; he says it is "in some places covered with thick flagging stones, in others with a kind of arch, consisting only of two stones placed in a slanting position one

against the other." This I take to be a very old form of an arch, if that term can be applied to it. The Queen's Chamber, in the great pyramid, is roofed with large stones placed exactly in this position, and above the lintels of the King's Chamber is a covering of the same kind. The entrance to the pyramid, although covered with flat stones, is protected by others above placed in the slanting position described by Herr Schick. In Stuart's "Athens" there is a representation of an old arch at Delos, which is similar. When I visited Solomon's Pools near Bethlehem, I was much interested in finding a rock-cut conduit, near to what is called the



Rock-cut Conduit,
and Stone-roofed conduit
Solomon's Pools
W. Simpson
March 1868.

"Sealed Fountain," which was roofed in this manner. The entrance to this conduit was roofed with an arch, which I supposed was modern in comparison with the more primitive construction of slanting stones. Sir Charles Warren has pointed out from the Talmud that one of the gates of the Temple—the gate Tadi—was formed in this manner—"all the gates had lintels except Tadi; there two stones inclined one upon another."

It is impossible to assume any definite age from this peculiar form, but we may accept it as an indication of at least some antiquity; if even an approximate date could be formed, it might be of considerable value in some of the archaeological questions connected with Jerusalem.

With this is a reproduction of my sketch of the Rock-cut Conduit at Solomon's Pools.

WILLIAM SIMPSON.

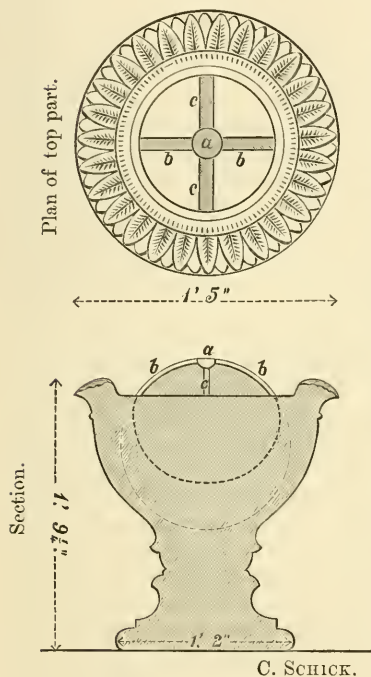
THE MIDDLE OF THE WORLD, IN THE HOLY SEPULCHRE.

HERR SCHICK has sent home very careful drawings of the particular object which marks, in the Greek Church of the Holy Sepulchre, the Middle of the World, or, as it is at times called, the Centre of the Earth. It stands on the mosaic floor under the dome of the Greek Church, a few paces to the east of the Holy Sepulchre, and is formed now of a vase, 1 foot 9 $\frac{1}{4}$ inches high, with a stone ball placed on the top; this stone is round on the top, with stripes of another kind of stone inserted to mark the cardinal points.

Herr Schick describes the vase, or "cup," as he calls it, as being "of the reddish native Jerusalem stone; the ball is rather of a more white kind, and the stripes *a a b*, with the [pole] or small ball in centre, is of black stone."

The first reference which has been applied to the Middle of the

World is contained in Ps. lxxiv, 12: "For God is my King of old, working salvation in the midst of the earth." This has been quoted by later writers in way of explanation; but the words may have a sense of their own, and had no application to the Middle of the World as understood afterwards. The idea of Jerusalem being the Middle of the World is at least as old as the fourth century. In that quaint old book, "The Works of the Reverend and learned John Gregory," who was chaplain to the Bishop of Salisbury in the time of Charles I, there is a chapter on the subject of "Noah's Prayer," and the writer quotes St. Ephrem in regard to the preservation of Adam's body and its burial in "*the Middle of the Earth*," by a Priest of the most high God. For *Adam* prophesied this reason for it, that there should be the Redeemer of him and all his Posterity. The Priest who was to officiate at this Funeral they say was *Melchisedec*, and that he buried this body at *Salem*; which might very well be the middle of the habitable world as then, and that



a. Seems to be the pole.

b b. The Equator.

c c. The Meridian.

it was indeed so afterwards, it hath been told you before;" p. 118. The notion of the Middle of the World is somehow connected with the supposition that Adam was buried at the spot; or at least near to it; the tradition is that he was buried under the rock of Calvary. The Mohammedans have a similar tradition about Adam having been buried in the Middle of the Earth. El-Masudi, in his "Meadows of Gold, and Mines of Gems," says, "God said to Sâm"—Shem—"I will preserve him for ever, whom I make the guardian of the body of Adam.' Sâm buried the coffin of Adam in the Middle of the Earth, and appointed Lamech as guardian." In this case Jerusalem was not the middle, for the Mohammedans believe that Adam was buried in

Mosque of El-Khayf, near Mecca. These two traditions seem to point to the conclusion that it is the supposed presence of Adam's body which gives the character to the spot.

St. Ephrem's words would show that the tradition in the Christian Church is as old at least as the fourth century. At a later period the references are numerous. Arculf visited Jerusalem about 700 A.D., and he "observed a lofty column in the holy places to the north, in the middle of the city, which, at mid-day at the summer Solstice, casts no shadow, which shows that this is the centre of the earth." One would suppose from the words that this column was somewhere in the town, and not in the Sepulchre; but the descriptions of the mediæval writers are very difficult to reconcile with each other. Compare the above with what Bernard the Wise says, who writes about a century and a half later; he describes four churches at the Holy Sepulchre, and between "is a parvis without roof, the walls of which shine with gold, and the pavement is laid with precious stone; and in the middle four chains, coming from each of the four churches, join in a point which is said to be the Middle of the World."

Sæwulf, date A.D. 1102, says, "At the head of the church of the Holy Sepulchre, in the wall outside, not far from the place of Calvary, is the place called Compas, which our Lord Jesus Christ himself signified and measured with his own hand as the Middle of the World;" to this he adds the words of Ps. lxxiv, 12: "For God is my King of old, working salvation in the midst of the earth." The "Compas" is one of the names the spot is known by, as if it merely served to indicate the cardinal points, like a compass on a map. Herr Schick's drawing and description shows that it preserves this character to the present day. Sir John Maundevile, it need scarcely be stated, is not a reliable authority, still his book is full of what were current traditions of the time. His date is 1322 A.D., he says, "And in myddes of that Chirche is a Compas, in the whiche Joseph of Aramathie leyde the Body of our Lord, whan he had taken him down of the Croys; and there he wassched the Woundes of oure Lord: and that Compas, seye men, is the Myddes of the World." Chap. vii.

Another title which it had was the "Navel of the World;" in the maps of the middle ages this term is often given. The Abbot Daniel gives it this name; his date is A.D. 1106-1107. "Behind the altar, outside of the wall, is the 'Navel of the Earth,' which is covered by a small building on [the vault of] which Christ is represented in mosaic, with the inscription, 'The sole of My foot serves as a measure for the heaven and for the earth.'" (*Palestine Pilgrim's Texts; The Abbot Daniel*, p. 13.) Sandys, who was in Jerusalem in 1611, says, "Towards the west end from each side equally distant, there is a little pit in the pavement [which they say] is the Navell of the World, and endeavour to confirm it with that saying in Scripture, '*God wrought his salvation in the midst of the earth,*' the which they fill with holy water." This "little pit" of Sandys' is very different from the "lofty column" of Arculf's description. At

present it is a vase with a curved stone projecting, but Herr Schick's section shows that holy water might still be poured on it, and find a receptacle.

WILLIAM SIMPSON.

THE SITE OF EBENEZER.

MANY years ago, after considerable study of the subject and repeated examination of the ground, I formed the opinion that the place of Ebenezer is now occupied by the village of Beit Iksa, and, notwithstanding that another site has been advocated by distinguished investigators, I still venture to think that this is the only spot which satisfactorily meets all the requirements of the case.

1. The spot should be "between Mizpah and Shen," and, as we may suppose, be a prominent and conspicuous spot. Such a spot is Beit Iksa. Taking Neby Samwil to be Mizpah, and Deir Yesin to represent Shen, an examination of the map will show that a line drawn from one to the other would intersect this village. It is also remarkable that owing to an opening in the hills a person standing at Deir Yesin and looking towards Neby Samwil has Beit Iksa in full view, although at a short distance the right or left it is not visible at all. From many other points it is very conspicuous, owing to its position near the summit of a hill abutting on the great valley of Beit Hannîna, which is there very open.

2. The locality should be adapted for the camping ground of a large army (1 Sam. iv, 1), have a supply of water, be easily defensible, so situated as to render communications with the interior of the Israelite territory easy, and afford a ready means of retreat in the event of an unsuccessful battle with the Philistine invaders. All these characterise the position of Beit Iksa. The hill on which it is built is nearly surrounded by deep valleys, whose steep, and in some parts precipitous, sides render the place almost impregnable in that direction, whilst a narrow ridge connects it with the only road along which the Philistines could march to the attack, which road, moreover, would expose the flank of the attacking force to an assault from the side of Mizpah. There is some water at the place itself, still more at Neby Samwil, and an unlimited supply at the neighbouring fountain of Lifta, which must have been well within the Israelite lines.

3. There should be in the near neighbourhood some spot meriting the name of Aphek, the stronghold, in which the Philistines could securely encamp, and from which they could make their attack on the Israelite position. Such a spot is Kûstûl, *castellum*, which commands the modern road between Jerusalem and Jaffa. To the north of the miserable hamlet called by this name there is a broad plateau which affords evidence of having been used for a camping ground in ancient times, being still

surrounded by the remains of a rampart of large stones. From this position the Philistines could march in great security along the summit of the hill, past the site of the present Beit Surik, until they came to where Biddu now is, when turning to the right they could direct their attack against either Mizpah or an enemy on the hill to the south, where Beit Iksa is situated.

4. The place should be so situated that a runner could reach Shiloh from it in a few hours. "There ran a man of Benjamin out of the army and came to Shiloh *the same day*," bearing news of the defeat of the Israelites, and loss of the ark. From Beit Iksa this might be accomplished by an eager and active messenger in four hours, or less; the distance being about eighteen miles. From Deir Abân Shiloh is eleven or twelve miles further.

5. Mizpah should be so situated that an attacking force, if badly beaten, seized with panic, and thinking only of escape to its own territory in the south-western plain, would naturally flee down the valley which passes "under Beth Car," and that the pursuing Israelites, especially if they happened to be imperfectly armed (Josephus, Ant. 6, 2, 2), would not deem it prudent to follow the fugitives further than that. The valley which divides the hill of Beit Surik from that on which Beit Iksa stands affords such a means of retreat from Neby Samwil, and it was probably down this valley, past 'Ain el 'Alik and 'Ain Beit Tulma, that the terrified Philistines (2 Sam. vii, 10, 11) reached the great watercourse which they knew would conduct them to their own country. Pressed by their pursuers, they would rush on by Motza (Kûlonieh) under their late camping ground at Aphek, over the boulders and rocks in the bed of the wady, and through the olive gardens at its sides, until they came "under Beth Car," which may be taken to be the village now called 'Ain Karim, where their foes would give up the pursuit, lest, becoming entangled in the narrow and stony valley, they should expose themselves to great risk in the event of the discomfited host rallying and turning upon them.

It may be objected to this identification that Neby Samwil has never been *proved* to be Mizpah, Deir Yesin Shen, or 'Ain Karim Beth Car. Yet, when all the circumstances connected with the events narrated being taken together support this theory; when it is found that the ancient names of two of the places are still retained; when it is remembered that the position of Neby Samwil and the tradition connecting it with that prophet are by almost all investigators held to favour the supposition that it is Mizpah; and when it is considered that the identification of each of these four places in a very remarkable manner supports that of the others, there is surely a strong presumption that we need go no further in search of the site of this famous monument of the last of Israel's Judges.

It may not be altogether idle to enquire why Samuel placed his memorial "between Mizpah and Shen" instead of at Mizpah. The latter was not only a very conspicuous spot, as its name implies, but it was also a seat of government, and a centre of the religious life of the people. It

was not to Shiloh, where the Tabernacle was, but to Mizpah that Samuel gathered all Israel and drew water and poured it out before the Lord and prayed to the Lord for them. Perhaps the answer to such an enquiry is, that he placed his monument where the ark of God had once stood. We are taught in the second book of the Chronicles (viii, 11) that a place whereunto the ark of the Lord had come was regarded as holy, and what more natural, after the signal deliverance which had been experienced, than that the great ruler and guide of the nation should erect "the stone of help" upon the spot once sanctified by the sacred emblem of the Divine strength? Josephus tells us the stone was called *ισχυρος*, "the stone of strength." In Psalm lxxviii, 61, we have "and delivered *his strength* (i.e., the ark) into captivity;" and again in 2 Chron. vi, 41, "arise, O Lord God, into Thy resting place, Thou and the *ark of Thy strength*;" in the Septuagint ἡ *κιβωτος της ισχυρος σου*. If the memorial came to be called in late times by its Greek name, it is not impossible that in *Iksa*, a word the derivation of which no one seems to know, we have a corruption of *ischuros*, like 'Amwas of Emmaus, Nablus of Neapolis. I have heard the place called Beit Iska, and a Mohammedan Sheikh once told me that that is the right name. The point is not of importance. The tendency of the Arabs to transpose consonants is well known.

It would seem that this idea of Ebenezer having marked the place on which the ark was once set misled Eusebius and his translator into supposing that the monument occupied the spot to which the Philistines brought back the ark. It is needless to say that there is no indication of this in the Bible; and it may reasonably be supposed that if Samuel had erected his trophy at Bethshemesh, or in the field of Joshua the Bethshe-mite, the narrative would have said so.

I have often questioned with myself whether these struggles with the Philistines did not (as some seem to suppose) take place nearer to the Philistine frontier than Neby Samwil and Beit Iksa are. But I find no confirmation of this suggestion in the sacred text. Other important battles against the same foes took place still further in the heart of the Israelite country, as at Michmash and on Mount Gilboa.

THOMAS CHAPLIN, M.D.

NOTE.

Dr. Chaplin having kindly sent me the proof of his paper on Ebenezer, I have only one or two remarks to offer on the subject.

I do not hold it to be proved that Deir Abân is Ebenezer, but, as I have pointed out in the "Memoirs," Deir Abân is the place which Jerome supposed to be Ebenezer. It is quite possible that Jerome was wrong in this as in other cases. The site of Mizpah is uncertain, as it may be either at Neby Samwil or perhaps at Shâfât. The identity of Shen and Deir Yasin seems to me doubtful, because names with Deir preceding are usually of Christian origin. 'Ain Kârim is, I believe, the Biblical Beth

Haccерem, but it might be Beth Car also. On two occasions I have searched the country south of Neby Samwil, hoping to find some monument such as Ebenezer, but we never found anything of the kind. I agree with Dr. Chaplin, however, in thinking that the distance from Deir Abân to Shiloh is an objection to the 4th century traditional site.

C. R. C.

ANTIOCH IN 1051 A.D.

IN a recent number of the *Quarterly Statement* (April, 1888, p. 66) Mr. Greville Chester has given an interesting account of the extant ruins of Antioch. The modern Turkish town, which Mr. Greville Chester visited during the autumn of last year, has preserved but few remains of the old Byzantine capital of the East. Earthquakes, for which the territory of Antioch has always been ill-famed, have thrown down most of the ancient buildings, and, for the rest, the Turks have destroyed the great city walls and carried off the stones of both temples and churches to build into their hovels.

Of the great Christian city, while still in the hands of the Greeks, and prior to the Arab conquest and the subsequent Latin occupation, so few records have come down to us that I have thought the following account, written during this early period by the Physician Ibn Butlân, may be worthy of publication.

During the centuries that succeeded the first Arab conquest Antioch, more even than the other great towns of Syria, suffered by the fortunes of war. Previous to that epoch, though sacked by the Persian Chosroes, Sapor, in A.D. 260, she had remained, without rival, the Eastern capital of the Byzantine Cæsars. In 635, however, Antioch shared the fate of all other places in Northern Syria, and fell into the hands of the all-conquering Arabs; but, unlike the cities and territories to the south, Antioch, together with Adana, Tarsus, and Mopsuestia, was retaken before thirty years had elapsed by the army of Nicephorus Phocas (A.H. 353, A.D. 964).¹ During the next hundred and twenty years (A.D. 964 to 1084) Antioch remained to the Byzantines, resisting all the attacks of the Muslims, and it was during the latter part of this period that the city was visited by Ibn Butlân.

In 1084 the citadel was at last betrayed into the hands of Sulaimân ibn Kutlinish, the Saljûk Sultan of Iconium. Fourteen years later, however, Antioch was retaken by the first Crusading armies, in 1098, after a siege which had lasted nine months, and which had been characterised by many extraordinary and miraculous events. Antioch then remained a Christian principality for the next hundred and eighty years, but in the end, after the Franks had been driven out of all the remainder of Syria, this last stronghold, too, fell (1268 A.D.) before the arms of the Egyptian Sultan Baibars, and it has since remained in the hands of the Muslims.

¹ See Gibbon, ch. lii, end.

The present account, descriptive of the city about A.D. 1051, while still (after the first short Arab occupation) in the hands of the Byzantines, is translated from the Arabic text given in Yâkût's great "Geographical Dictionary,"¹ which latter work was written in A.D. 1225. Yâkût quotes the account verbatim from the "Epistle" (*Risâlah*) which Ibn Butlân addressed to his friend, Abu-l Husain Hilâl ibn al Muhsin as Sâbî, at Bagdad. The "Epistle" was written "in the year 440 and odd," says Yâkût; the date, however, mentioned incidentally in the course of the narrative, shows that Ibn Butlân must have passed through Antioch during the year 443, i.e., A.D. 1051. Ibn Butlân was a well-known Christian Arab physician, and a native of Bagdad. In A.H. 439 (A.D. 1047) he set out from that city to visit his Egyptian rival, the physician Ibn Rudhwân, at Cairo, and, going thence to Constantinople, took his return journey through Antioch. Here, age and the vanity of human wisdom caused him to abandon the world, and he became a monk, dying very shortly afterwards at Antioch, in the year 444 A.H. (1052 A.D.).²

In Hajji Khalfah's "Bibliographical Dictionary" mention is made of a medical work by Ibn Butlân which appears to have enjoyed some celebrity,³ but no notice is taken of his "Epistle," of which, to the best of my knowledge, no MSS. are known in Europe, and which therefore is only available to us in the extracts inserted by Yâkût in his "Geographical Dictionary." He writes as follows:—

Says Ibn Butlân, in the Epistle he wrote to Abu-l Husain Hilâl ibn al Muhsin as Sâbî, at Bagdad, in the year 440 and odd:—

"We left Halab (Aleppo) intent on journeying to Antâkiyyah (Antioch), and the distance is a day and a night's march; and we found all the country between Halab and Antâkiyyah populous, nowhere ruined abodes of any description. On the contrary, the soil was everywhere sown with wheat and barley, growing under the Olive trees; the villages ran continuous, their gardens full of flowers, and the waters flowing on every hand, so that the traveller makes his journey here in contentment of mind, and peace and quietness."

"Antâkiyyah is an immense city. It possesses a wall and an outer wall (*fasîl*). The wall has 360 towers, and these are patrolled in turn by 4,000 guards, who are sent to Antâkiyyah every year from the presence of the King in Constantinople, as warrant for the safe-keeping of the city, and in the second year they are changed. The plan of the city is that of a semicircle; its diameter lying along the mountain,⁴ and the city wall climbs up over the mountain to its very summit; and further the wall completes the semicircle (in the plain below). On the summit of the mountain, but within the wall, is a castle (*K'alâh*), which appears quite small from the city below on account of its distance up; and this

¹ Mu'jam al Buldân, ed. Wüstenfeld, vol. i, pp. 382-385.

² See Wüstenfeld: Geschichte der Arab. Aerste, p. 78, No. 133.

³ Hajji Khalfah, vol. iii. p. 229, No. 5087.

⁴ Mount Silphius. For an account of the present condition of these walls see Mr. Greville Chester's paper, p. 67.

mountain shades the city from the sun,¹ which only begins to shine over it about the second hour (of the day). In the wall surrounding (the city), and in the part not on the mountain, are five gates."

"In the centre of the city is the Church of Al Kusyân. It was originally the palace of Kusyân the King, whose son, Futrus (St. Peter), chief of the Disciples, raised to life.² It consists of a chapel (*Haikal*), the length of which is 100 paces and the breadth of it 80, and over it is a Church (*Kanîsah*) supported on columns, and all round the Chapel are colonades in which the Judges are seated to give judgment, also those who teach grammar and logic. At one of the gates of this church is a Clepsydra (*Fînân*) showing the hours. It works day and night continuously, twelve hours at a round, and it is one of the wonders of the world."

"In the upper portion (of the city) are five terraces, and on the fifth of these are the baths, and gardens, and beautiful outlooks. You may hear in this spot the murmuring of waters, and the cause thereof is that the waters run down to this place from the mountain which overhangs the city. There are in Antâkiyyah more churches than can be counted; every one of them ornamented with gold and silver and coloured glass, and paved in squares. In the town is a Bîmâristân (or Hospital), where the Patriarch himself tends the sick, and every year he causes the Lepers to enter the bath and washes their hair with his own hands. Likewise the King also does this service every year to the poor. The greatest of the lords and patricians vie in obtaining of him permission after the like fashion to wash and serve these people. In this city there are hot baths, such as you can find the equal nowhere else, in any other town, for luxury and excellence; for they are heated with myrtle wood (*al âs*), and the water flows in torrents and with no scant. In the Church of Al Kusyân are innumerable servants who all receive their daily rations, and there is an office (*dîwân*) for the expenditure and receipts of the Church, in which office are some ten or more accountants."

"Some year and a part ago a thunderbolt struck the Church, and the manner of its doing so was most extraordinary. Now at the close of the year 1362 of Alexander, which coincides with the year 442 of the Hijrah (1050 A.D.), the winter rains had been heavy, and some part of the days of the month Nîsân (April) were already past, when, on the night whose morrow was Saturday, the 13th of Nîsân, there came thunder and

¹ The mountain is to the south of Antioch.

² The church here alluded to must, I imagine, be that dedicated to SS. Peter and Paul, and built by the Emperor Justinian, where, in later times (according to the traveller Willebrand, of Oldenburg), the Latin Princes of Antioch were buried. Who is referred to under the name *Kusyân* I have been unable to discover, neither do I know of any mention of St. Peter having raised a king's son to life at Antioch. Perhaps some reader of the *Quarterly Statement* more versed than myself in the Apocryphal gospels may be able to give us light on this point. According to Church tradition, based on Gal. ii, 11 *et seq.*, St. Peter was Bishop of Antioch before going to Rome.

lightning such as had never been known in the present time, nor remembered nor heard of in the past. The claps of thunder were oft repeated, and so terrible as to cause the people to cry out in fear. Then, on a sudden, a thunderbolt fell and struck a Shell¹ which screens the altar (in the Church) of Al Kusyân, and it split from off the face of this Christian (emblem) a piece like what might be struck off by an iron pick-axe with which stone is hewn. The iron cross, too, which was set on the summit of this Shell, was thrown down (by the stroke), and remained on the place where it fell; and a small piece also was cut off from the Shell. And the thunderbolt descended through the crevass in the Shell, and travelled down to the Altar along a massive silver chain, by which is suspended² the Censer; now the size of this crevass was of two finger-breadths. A great piece of the chain was broken off, and part of it was melted, and what was melted of it was found dropped down on the surface of the ground below. A silver crown which hung before the table of the Altar was also thrown down. Beyond the table (of the Altar), and to the west of it, stood three wooden stools, square and high, on which were usually set three large crosses of silver, gilt, and studded with precious stones; but the night before they had removed two of the crosses, those on either side, taking them up to the Church Treasury, and leaving only the middle cross in its place. Now the two stools on either side were smashed (by the thunderbolt), and the pieces sent flying over and beyond the Altar—though here there was seen no mark of fire, as had appeared in the case of the chain—but the stool in the middle remained untouched, nor did anything happen to the cross that was set thereon.”

“Upon each of the four marble columns which supported the silver dome covering the table of the Altar was cloth of brocade, wrapping round the column. Each one of these suffered a greater or lesser stroke (from the thunderbolt), but the stroke fell in each case on a place (in the cloth) where it had been already worm-eaten and worn to shreds; but there was no appearance as though flame had scorched it, or that it had been burnt. The table (of the Altar) was not touched, nor was any damage done to the (altar) cloths upon it; at least, no sign of it was to be seen. Some of the marble (slabs) which were in front (below) the table of the Altar were struck as though by the blow of a pick-axe, and the mortar

¹ The word in the text is *Sadafah*, which the dictionaries translate “a shell, particularly of a kind found in the Red Sea.” What Church vessel or ornament is here intended I cannot tell, but perhaps some who are well acquainted with the details of the Greek rite would be able to throw some light on the matter. *Sadafah* (written without vowels, the first letter being the guttural s, *Sad*) may possibly not be an Arabic word, but merely the transcription of the Greek name of some church ornament. I can, however, find nothing in Du Cange to answer to *Sadafah*, *Sudfah*, or *Sidfah*, &c.

² The word given in the text is *al Thumiyatûn*, evidently not an Arabic word. In Du Cange (Gloss. Mediæ et Infimæ Græcitat. Ludg. Bat. MDCLXXXVIII, p. 502). I find “*Θυριακόν*, *Thuribulum* (a censer), *Acerra* (a casket for incense),” which I take to be the object intended.

and lime setting thereof (was cracked). Among the rest was a large slab of marble, which was torn from its bed and fractured, and thrown up on to the square top of the silver dome covering the table of the Altar, and here it rested, the remaining pieces of the marble being torn from their bed and scattered far and near. In the neighbourhood of the Altar was a wooden pulley, in which was a hemp rope—quite close to the silver chain which had been broken, and part of it melted—and (to this rope was) attached a large silver tray, on which stood the bowls¹ of the glass lamps. This tray remained untouched, none of the lamps were overturned, nor aught else; neither did any damage happen to a candle that stood near the two wooden stools (formerly mentioned). The greater part of these wonderous occurrences were witnessed by many who were in Antâkiyyah.”

“Outside the city, on the night of Monday, the 5th of the month Âb (August), of the year before mentioned, there was seen in the heavens the likeness of a window, through which light shone out broad and glittering, and then became extinguished. The people waited till morning, expecting some event therefrom. And after a time news came that in the early part of the day of that Monday, at the City of Ghunjurah,² which lies in the Greek country, and is nine days’ journey from Antâkiyyah, terrible earthquakes had taken place, following one another continually. The greater number of the houses (of this city) had been thrown down, and a piece of ground outside the town had been swallowed up, while a large church and a fine fortress which had stood there had both disappeared, so that no trace remained of either. From the crevass extremely hot water had been thrown up, flowing forth from many springs. It had drowned 70 farmsteads; and the people fleeing therefrom had escaped for safety to the hill tops, and high places around. The water covered the surface of the ground during seven days, spreading round about the city for the distance of two days’ journey. After that time it disappeared, and the place where it had been became a swamp. A number of those who were witnesses of these events testified thereto, and the people of Antâkiyyah reported to me all that I have here set

¹ In the text the word is *firâkh*, which means literally “chickens” of the glass lamps. The word, however, has other meanings, as *arch-way*, *folio of paper*, &c., and must, I imagine, be taken here in the sense of a *bowl* or other vessel, in which the wick of the lamp was set.

² Gunjurah is, I conclude, the town of Gangra, the capital of Paphlagonia, and the Metropolitan See of the province. Yakût does not mention Gunjurah elsewhere. The geographer Kaswîni (Wüstenfeld’s ed. of the text, vol. ii, 368) says that Gunjurah is a city in the Greek Territory and stands on the river called *al Maklûb* (the overturned river)—a name also given to the Orontes, as stated below, because it flows from south to north, contrary to the habit of other rivers. This river *al Maklûb* must be the name of one of the affluents of the Halys, which flows north into the Euxine, on which the town of Gangra is built. Kaswîni then proceeds to give the story of the great earthquake and inundation in much the same words as those found in our text.

down. They related further, that when the inhabitants had carried up their goods to the hill tops, the ground rocked so by the mighty earthquake that their chattels came rolling down again to the level earth below."

"Outside the city (of Antâkiyyah) is a river called Al Maklûb¹ (meaning the Overturned, because) it takes its course from south to north. It is of the size of the Nahr 'Isâ (in Babylonia). There are, along its bank, mills, and it waters the gardens and grounds (of the city)."

(Saith Yâkût), so ends what we have transcribed from the work of Ibn Butlân.

GUY LE STRANGE.

THE MUSLIM LEGEND OF THE CAVE OF THE SLEEPERS.

THE story of the Companions of the Cave is one that from earliest times has proved a favourite with the Muslims. This probably was in the beginning due to the fact that the Prophet had set the incidents connected with the legend of the Seven Sleepers of Ephesus to illustrate one of the didactic chapters of the Koran. The Christian legend will be found related at length in the *Acta Sanctorum* of the Bollandists, under date of July 27th. (Tomus vi, p. 375. *de SS. Septem Dormientibus*.)

Briefly the account given is that in the year 250 A.D., during the reign of the Emperor Decius, there lived at Ephesus seven young men, brothers, and ardent Evangelists, whose names, as given in the Roman martyrology, were : Maximilianus, Marcus, Martinianus, Dionysius, John Serapion and Constantinus. In order to escape the persecution then being directed against the Christians, they hid themselves in a cave in Mount Cælian. On being discovered by their persecutors they were walled up in the Cave, and there took sleep in the Lord. In the year 470, under the Emperor Theodosius, their bodies were discovered and ultimately were brought to the Church of St. Victor, in Marseilles, where they now lie.

The legend was apparently of Syrian origin. It has given its name to the 18th chapter of the Kuran, of which the following verses are the most important :—

Verse 8.²—Hast thou reflected that the Inmates of the Cave and of Ar Rakîm were one of our wondrous signs ?

Verse 9.—When the youths betook them to the Cave they said "O, our Lord ! grant us mercy from before Thee, and order for us our affair aright."

Verse 10.—Then struck we upon their ears (with deafness) in the Cave for many a year.

¹ The Orontes.

² Quoted from Rev. J. M. Rodwell's translation.

Verse 16.—And thou mightest have seen the sun when it rose pass on the right of their Cave, and when it set leave them on the left, while they were in its spacious chamber.

Verse 17.—And thou wouldest have deemed them awake though they were sleeping ; and we turned them to the right and to the left. And in the entry lay their dog with paws outstretched. Had'st thou come suddenly upon them thou wouldest surely have turned thy back on them in flight, and have been filled with fear at them.

Verse 18.—Then we waked them that they might question one another. Said one of them, "How long have ye tarried here?" They said, "Your Lord knowest best how long ye have tarried ; send now one of you with this your coin into the city, and let him mark who therein hath purest food, and from him let him bring you a supply ; and let him be courteous and not discover you to any one.

Verse 19.—For they if they find you out will stone you, or turn you back to their faith, and in that case it will fare ill with you for ever."

Verse 20.—And thus we made their adventure known to (their fellow-citizens), that they might learn that the promise of God is true.

Verse 21.—Some say they were three, their dog the fourth ; others say five, their dog the sixth guessing at the secret, others say seven, their dog the eighth.

Verse 24.—And they tarried in their cave three hundred years and nine years over.¹

During the course of the last twelve months, while getting together the materials for a book which, it is hoped, will contain all the important notices of Palestine and Syria that occur in the works of the mediæval Arab geographers, I have had occasion to devote much of my attention to the pages of Yâkût's great "Geographical Encyclopædia."² Of Yâkût, his life, and his works, I have given some short account in a recent paper in this journal.² The prodigious extent of Yâkût's labours, however—for the book gives a detailed account of all the countries and towns in Muslim lands (as matters stood in the 13th century) from Spain in the west to beyond Transoxiana and India in the east—is but little known beyond the narrow circle of Semitic scholars, for the work has never been translated. Some idea of the mass of information, both geographical and historical, therein contained may perhaps be gathered from the statement that the Arabic text, as printed at the cost of the German Oriental Society, covers close on *four thousand* pages, large 8vo.; an English translation, with the needful notes, would therefore occupy from double to treble that space.

¹ They entered the cave under Decius, and awoke in the time of Theodosius, according to the Christian tradition, *i.e.*, about 220 years, which does not agree with the 309 years of the Kurân. See Gibbon, "Decline and Fall," at the end of chapter xxxiii.

² *Quarterly Statement* for January, 1888.

Scattered up and down the volumes of *Yâkût*, under various headings, are many curious details relating to the legend of the Seven Sleepers, and these I have now brought together for purposes of comparison with accounts derived from other early Muslim writers.

Starting with the verses of *Kurân*, before quoted, where "The Cave and *Ar Rakîm*" are mentioned, the Muslims were much exercised in their minds as to what signification should be attached to the word *Ar Rakîm*. According to one account ("*Yâkût*," ii, p. 805), *Ar Rakîm* was said to be "a tablet of lead on which were inscribed the names of the men of the Cave, and their history and the date of their flight." The authority of the great traditionist Ibn 'Abbas, is, on the same page, given in support of the view that *Ar Rakîm* was the name of the Cave, which, it is further stated, "lay between 'Ammuriyah (Amorium) and Nîkiyah (Nicaea), being ten or eleven days' journey from Tarsus." Other authorities, however (says *Yâkût*), hold *Ar Rakîm* to be either the name of the village where the youths lived, or of the mountain in which the cave was to be found. Or, says *Yâkût*, at another place (ii, 175), "*Jairam*, is said to be the name of the Cave of the Sleepers."

The same Ibn Abbas ("*Yâkût*," ii, 805) further states that the names of the Seven Sleepers were these :—*Yamlîkhâ* (Jamblichus), *Maksimilînâ* (Maximilianus), *Mashilînâ* (Marcellus?), *Martânûs* (Martianus), *Dabriyûs* (Dionysius? or Demetrius?), *Sirabiyân* (Serapion), and *Afastatiyûs* (Exustadianus?). The name of their dog being *Kitmir*, and of the king from whom they fled *Dakyânûs* (Decianus, a mistake for Decius). The name of their city is given, very correctly ("*Yâkût*," ii, 806), as *Afasûs* (Ephesus); *Ar Rakîm* being here the name of the cave, and *Ar Rass* the name of the village where the youths dwelt. In a previous article, however ("*Yâkût*," i, 91), we find another spelling :—" *Abasûs*, a ruined city of the country of the Greeks, from which the Companions of the Cave came. It is said to be the City of *Dakiyânûs*, and it lies near *Abulustain*." Two pages further on (*op. cit.*, i, p. 93) *Abulustain* is given as "a celebrated city in the Greek country, near to which is *Ar Rakîm*." *Abulustain*, near Ephesus, is the place at the present day called *Al Bustân*. In the last volume of "*Yâkût*" (vol. iv, p. 1040), "*Yanjâlûs*" (evidently a Greek name) is stated to be the name of the mountain in which lay the Cave of the Sleepers, but some doubt is expressed as to where the mountain was situated.

Besides the neighbourhood of Ephesus, *Yâkût* localises the legend in two other places, namely, in the trans-Jordanic province of the *Balkâ*, and in Spain. In the latter country, says "*Yâkût*" (vol. ii, p. 125, and also p. 806), "some say the Cave and *Ar Rakîm* are to be found at *Jinân al Ward* (the Gardens of the Rose), in Andalusia, and that *Tulaitalah* (Toledo) is the City of *Dakiyânûs*—but God knows best." Of *Ar Rakîm*, in the *Balkâ*, a curious story relating to a cave will be found given in "*Mukaddasi*" (p. 56 of my translation, Pal. Pil. Text Soc.), which, however, is not of sufficient importance to be quoted over again in this place.

Dating from the early days of Islam, we have two separate and very

circumstantial accounts of visits to certain caves in Asia Minor, said in each case to have been the particular Cave of the Sleepers. They are both quoted by Yâkût. One dates from the days of 'Abu Bakr, the successor of Muhammad ; the other visit is related as having taken place about two centuries later under the Abbaside Khalif of Baghdad, Al Wâthik, grandson of Harun ar Rashid.

Of the first account the following is a translation :—

(“ Yâkût,” vol. ii, pp. 806, 807.)

Ubâdah ibn as Sâmit relates as follows :—“ Abu Bakr as Siddîk despatched me, the year he became Khalif (A.H. 11, A.D. 632) to the King of Rûm to exhort him to receive Islâm, or else to declare him war.”

'Ubâdah continues :—“ We journeyed until we entered the country of the Greeks, and when we were approaching Constantinople, there appeared before us a red mountain in which they said were the Companions of the Cave, and Ar Rakîm. So we turned aside to a monastery and enquired of the people thereof concerning them ; and they pointed out a passage in the mountain. Then we told them that we wished to see the (Companions of the Cave). They said ‘give us somewhat,’ and we gave them Dînârs. Then they entered the passage, and we entered after them, and there was herein a door of iron which they opened, and they brought us to a mighty chamber (*bait*), hollowed in the mountain in which were thirteen men, lying on their backs, as though they were asleep. They all were covered from head to foot with dust-grey cloaks and shirts. We could not discover whether their clothes were of wool or of hair, or of what other material, but the texture was harder than brocade, and crackled from their thickness and the excellence of the stuff. We saw that most of them had on boots (*khufâf*), reaching up to the middle of the leg, but some were shod with sandals (*nʿâl*) sewn together. Both the boots and the sandals were of excellent sewing, and the leather was such as the like I have not seen elsewhere. We uncovered their faces, one after the other, and lo ! in all was the complexion of healthful bloom, and of red blood (in the cheeks) as is the appearance of a living man. Of some (the hair) was turning grey, and some were in their youth with black hair, some had flowing locks and some were shaven. Their stature was that of ordinary Muslims. When we came to the last of them we beheld that his head had been cut off with a sword-stroke, and it was as though it had been struck off that very day. We enquired of those who had conducted us hither, what they did with these men. They replied, it was their wont to come in here on the festival day of (the Companions of the Cave), when the people of all the country would assemble at the gate of the cave, coming in from all the towns and villages around ; and that then, during some days, they would stand the dead men upright in order to clean them, and shake the dust from their cloaks and shirts, also they pared their nails, and cut their moustaches ; and after this they laid them down once more in the position in which we now saw them.

“ Then we enquired of our guides as to who these men had been, and

what had been their office, and how long they had lain in this place. The guides answered us they had found in their books that these men had lain in this place since 400 years before the Coming of the Messiah—peace be upon Him—and that they had been Prophets, sent at a certain time, and that they knew naught more of their condition but this.”

Says 'Abd Allah (Yâkût), the poor servant (of God) :—“All this have I copied from the work of a man of trust, but Allah alone knows if it be true.”

A similar account to the one just quoted (of 'Ubâdah's visit) is given in almost identical terms by Mukaddasi (*see* p. 6 of my translation, published in the “Palestine Pilgrims Texts”), with, however, the following variants :—Mukaddasi, writing in A.H. 375, A.D. 985, states that his account is from a certain *Mujâhid ibn Yazîd*, who accompanied Khâlid al Baridî to Constantinople, in A.H. 102, A.D. 720, that is about ninety years later than the above-mentioned expedition by 'Ubâdah. The details of what was seen are, however, in the main identical with the first account—as regards the appearance of the men, their clothes, the nail-paring, &c., and the feast-day when the country people came to visit them. The cave, on the other hand, is stated to have been situated in the mountains at Al Hawiyyah, not far from Laodicea Combusta, between Armorium and Iconium, and the guardians further gave the following account of “the Prophet” whose head had been cut off.

(Translation of Mukaddasi, p. 7).

They answered, saying, “When the Arabs came down on us and took possession of Al Hawiyyah, we gave them this information concerning these dead men, but they would not believe us, and one of the Arabs struck the head off this body.”

With these two accounts of visits in A.H. 11, and in A.H. 102, may be compared the account of the Astrologer Musa, whose visit took place more than a century later than that of Mujâhid.

(“Yâkût,” vol. ii, pp. 805, 806).

It was (the Khalif) Al Wâthik (A.H. 227–232, A.D. 842–847), who sent Muhammad Ibn Mûsâ al Munajjim (the Astrologer) to the countries of the Greeks to discover the Companions of the Cave and Ar Rakim. This (Muhammad, the Astrologer) reports (of his journey as follows) :—“And we reached the country of the Greeks, and lo ! before us was a small mountain, the base of which was not more than a thousand ells (round). In its side is a passage, and you enter by this passage and pass through a tunnel in the ground for the distance of three hundred paces, when you arrive at a portico (*Riwâk*). This is in the mountain ; it is supported by columns cut out (of the rock. In the rock) are numerous chambers (*baît*), and among them one with a tall door-way, of man's height, closed by a stone gate. It is here the dead men lie. There was one in attendance who guarded them, and with him were eunuchs. The guardian would have turned us aside from seeking to see the dead men, for he said, that of a surety he who went down to seek them would

receive some bodily injury. But by this dissimulation he sought to keep the advantage thereof to himself (and his people)."

"Then said I to him, 'Give me but a sight of them, and thou shalt be free (of all blame in the matter).' So I ascended, with great pain, a rough way, accompanied by one of my young men, and I beheld these (dead men). And lo ! (their bodies) had been rubbed with unguents, the hair being soft to the hand, and their limbs anointed with aloes and myrrh, and camphor to preserve them. Their skin clave to the bones, for I passed my hand over the breast of one of them, and I found the hair thereof rough. The garments were strong (of texture)."

"After that (we had returned) the guardian presented us with food, and besought us to eat ; but when we took thereof and tasted it, our stomachs revolted from it, and vomited it up again. It was as though a vilany had been attempted and that (the guardian) had sought to kill us, or certain of us at least, in order to justify the words of dissimulation used in the presence of the king, when saying that the companions of Ar Rakim would surely work us evil. Then said we to the (guardian), 'We had imagined they would have been living men, but with the semblance of those who are dead ; but behold these (men) are not of this sort !' And we left him and went our ways."

Speaking of this and other accounts of the Cave of the Seven Sleepers, Al Birûnî (who wrote in A.H. 390, A.D. 1000) has some pertinent remarks. I quote from Prof. Sachau's excellent translation of the text,¹ where, in the chapter on the Festivals of the Syrian calendar, under the date of the "5th of Tishrin I." (October), we find the following :—

"Commemoration of the Seven Sleepers of Ephesus, who are mentioned in the Coran. The Khalif Al Mu'tasim had sent along with his ambassador another person who saw the place of the Seven Sleepers with his own eyes and touched them with his own hands. This report is known to everybody. We must, however, observe that he who touched them, *i.e.*, Muhammad ibn Mûsâ ibn Shâkir, himself makes the reader rather doubt whether they are really the corpses of those seven youths or other people—in fact, some sort of deception. 'Ali ibn Yahyâ, the Astronomer, relates that on returning from his expedition he entered that identical place, a small mountain, the diameter of which at the bottom is a little less than 1,000 yards. At the outside you see a subterranean channel, which goes into the interior of the mountain, and passes through a deep cave in the earth for a distance of 300 paces. Then the channel runs out into a sort of half-open hall in the mountain, the roof being supported by perforated columns ; and in this hall there is a number of separate compartments. There, he says, he saw thirteen people, among them a beardless youth, dressed in woollen coats and other woollen garments, in boots and shoes. He touched some hairs on the forehead of one of them and tried to flatten them, but they did not yield. That their number is more than seven—which is the Muhammadan—and

¹ Sachau's translation of Al Birûnî's *Athâr ul Bâkiya*, 1879, p. 285.

more than eight—which is the Christian tradition—is perhaps to be explained in this way, that some monks have been added who died there in the same spot. . . .”

A few words may be added in conclusion regarding the names of the Seven Sleepers, as given in the authorities quoted in the “Acta Sanctorum” of the Bollandists (Julii, Tomus VI, p. 375, *et seq.*), and in the “Bibliotheca Orientalia” of Assemani (Vol. I, p. 335, *et seq.*).

The legend of the Seven Sleepers is first referred to in Western literature by Gregory of Tours (“De Gloria Martyrum,” Vol. I, 9, caput 95), according to whom they were seven in number, their names being Clemens, Primus, Lætus, Theodorus, Gaudens, Quiriacus (or Cyriacus) and Innocentius. In the official list of the Roman “Acta Sanctorum” the names appear in Latin, as :—Maximianus, Constantinus, Malchus, Serapion, Martinianus, Dionysius, Johannes; in Greek the first two figure as Maximilianus and Constantinianus respectively, while Exacustodianus replaces Malchus, and Jamblichus, Serapion.

In Assemani (“Bibl. Or.,” Tom. I, p. 336) we find a list taken from the writings of Dionysius, the Jacobite patriarch, who gives the number as *eight*, their names being : Maximilianus, Jamblichus, Serapion, Martinianus, Johannes, Exustadianus, Dionysius, and Antoninus.

The following are the names, *seven* in number, from other Martyrologies, as given in the “Acta Sanctorum” (*loc. cit.*, p. 376) :—

Russian.—Maximilianus, Dionysius, Amulichus, Martinus, Antoninus, Johannes, Marcellus.

Ethiopian (as given by Jobus Ludolfus, “Calendarium Æthiopicum,” p. 436) :—Arshaledes, Diomedes, Eugenius, Dimatheus, Bronatheus, Stepheus, Cyriacus.

The list given by the Arab traditionist, Ibn ’Abbas (cited above, p. 273), is doubtless somewhat corrupt. In “Eutychius” (edited by Pocock, Vol. 1, p. 390 of the text) the names appear as : Maksimyanûs, Amlîkhus, Diyânûs, Martimûs, Diyûnisiyûs, Antûniyûs, Yuhannâ.

This variety in the names would appear to have struck the Martyrologists as requiring some sort of explanation. In the “Acta Sanctorum” (*loc. cit.*, p. 376) the opinion of an anonymous Greek author of a MS. in the Medicean Library is quoted, as also that of Boninus Membricitius. These are both of the opinion that the variants were due to the fact that the individuals are cited in one account under their original Pagan names, in another under the names they received in baptism. Thus, according to the anonymous Greek author :—

Μαξιμιλιανὸς	was baptised	Ἀχιλλίος.
Δεμετριος	”	Ἰαμβλίχος.
Ἐξακουστούδιανος	”	Διομηδης.
Ἀντωνιος	”	Κυριακος.
Μαρτινος	”	Ἐυγενιος.
Διονυσιος	”	Στεφανος.

Boninus Membritius, however, has the list as follows :—

Achiledus	was baptised	Maximus.
Diomedus	„	Malchus.
Eugenius	„	Martinianus.
Stephanus	„	Constantius.
Probatius	„	Dionysius.
Sambatus	„	Johannes.
Cyriacus	„	Serapion.

The story of the Sleepers, though probably at first merely a local legend of Syrian origin, has been carried far and wide, over the West and the East. One version is found in Scandinavia, and the account localised in Muslim Spain has already been alluded to. Finally, are not the numerous popular beliefs, according to which Arthur, Barbarossa, Roderic the Goth, and, at a later period, Don Sebastian of Portugal (not to mention various other renowned monarchs), are now asleep in caverns, but will awake and return to reign in the fulness of time—are not all these but variations of the old legend of which the Cave of the Sleepers of Ephesus is the first Christian example?

GUY LE STRANGE.

AN INSCRIPTION IN THE AKSÂ MOSQUE.

IN my translation of Nâsir-i-Khusrau's account of Jerusalem and Palestine, recently published by the Palestine Pilgrim's Text Society, there is a mistake in a note which I should wish to correct. The first note on p. 37 of the translation reads as follows :—

“In 425 A.H. (1033) the dome of the Aksâ Mosque had been seriously damaged by a shock of earthquake. It was restored next year by order of the Fatimite Khalif of Egypt, Ad Dhâhir, the work, *according to the extant inscription in the dome*, having been terminated in the month Dhû l Kaâdah, 426 A.H. (September, 1035), that is less than eleven years prior to our Pilgrim's visit.”

The words printed in *italics* should be altered as follows :—

“*According to the inscription quoted (A.D. 1173) by Ali of Herat, and probably still extant,*” &c.

The mistake arose from my having confounded an inscription mentioned by M. de Vogüé as still existing in the Dome of the Rock, with the one mentioned by Ali of Herat as read by him in the Dome of the Aksâ Mosque.

The earthquake of the year 407 A.H. (1016 A.D.) had greatly damaged the framework of the Dome of the Rock, and this was restored by order of the Fatimite Khalif Ad Dhâhir, as shown in the inscription, in ancient Karmatic characters, still to be seen on the framework in that dome,

which M. de Vogüé has reproduced in his work "*Le Temple de Jérusalem*," at p. 93. Of this inscription the following is a translation :—

"In the name of Allah the Compassionate, the Merciful. Verily he who believeth in Allah, restoreth the Mosques of Allah. Hath commanded the restoration of this Blessed Dome, the Imâm Abu-l-Hasan 'Ali ad Dhâhir li Izâz ad Dîn Allah, the son of Al Hâkim bi Amr Illah, Commander of the Faithful, the benediction of Allah be upon him, and on his most pure and generous forefathers. This was executed at the hand of his servant the Amir, the supporter of the Imâms, the sustainer of the State, Ali ibn Ahmad Inâbat Allah, in the year 413 (A.D. 1022). May Allah perpetuate the glory and the stability of our Master the Commander of the Faithful ; giving him kingship over the East and the West of the earth : for Him we praise at the beginning and the ending of all actions !"

Further, inside the Dome of the Rock, on the tile-work, can still be read an inscription, which is unfortunately much mutilated, but of which the last few words are plainly legible. (*Cf.* de Vogüé, *op. cit.*, Plate XXIII.) The last words may be translated, ". . . in the year four hundred and eighteen." A.H. 418 = A.D. 1027, which shows that these tiles were put up to replace those damaged probably by the same earthquake.

A third inscription of the same period, relating to the Khalif ad Dhâhir's restoration, is also given by M. de Vogüé (*op. cit.*, p. 77). He states it may still be clearly read, though in a rather dilapidated condition, on two of the battlements of the outer wall of the Haram Area, near the *Cradle of Jesus*, at the S.E. angle. The remains of this inscription, translated, read as follows :—

". . . the days of the Imâm ad Dhâhir li Izâz ad Dîn Allah, the Commander of the Faithful . . . (words illegible) . . . the southern outer wall and the . . . (eastern ?) outer wall . . . year four hundred and twenty-five."

The year 425 (A.D. 1033) was the year of the earthquake, when the dome of the Aksâ Mosque was damaged.

I now come to the inscription in the Dome of the Aksâ Mosque, seen by Ali of Herat, of which M. de Vogüé makes no mention, but which may very probably still be discovered should search be made. Perhaps Mr. C. Schick, or some other gentleman at present resident in Jerusalem, would take the trouble to look for it.

In the Bodleian Library is an excellent little manuscript of Ali of Herat's description of the Holy Places, which he visited in A.D. 1173. The MS. is numbered 17 E. D. Clarkii, Uri, CLV. From folio 36 verso, I translate the following :—

"*The Aksâ Mosque*.—In this mosque is the Mihrâb of Omar ; the Franks have not done it any damage.

"On the roof I read the following inscription :—

"'In the name of Allah the Compassionate, the Merciful. Praise to Him who brought His servant (Muhammad) by night from the Masjid

al Harâm (at Mekkah) to the Masjid al Aksâ (at Jerusalem), on the precincts of which we invoke a blessing. May Allah give aid to His servant and vicar Ali ibn Abu-l Hasan ad Dhâhir li Izâzi dîn Allah, the Commander of the Faithful—Allah's benediction be upon him and upon his immaculate forefathers, and upon his beneficent sons! For the restoration of this same Dome and its gilding hath given command our illustrious and dear lord, the chosen servant of the Commander of the Faithful and his devoted servant, Abu-l Kâsim Ali ibn Ahmad—Allah give him aid and protection! The whole of this (building) was accomplished by the last day of the month Dhû-l Kaâdah, of the year 426: he who (superintended) the building of the same being 'Abd Allah ibn al Hasan of Cairo the architect.'

"The inscription, as well as the porticoes, are all done over with mosaics of gold, and these the Franks have not touched or in any way damaged."

With a view of the possible recovery of this interesting inscription, I add a copy of the Arabic text as given by Ali of Herat in the MS. of the Bodleian. I should add that M. C. Schefer, in his extracts from Ali of Herat's work given in the *Journal of the "Société de l'Orient Latin,"* tome i, p. 587, has printed a slightly different version of this same inscription taken from a MS. of Ali of Herat, in his own collection:—

[Bodley MS. Uri, CLV., folio 37 recto.]

بسم الله الرحمن الرحيم سبحانه الذى اسرى بعبده ليلا من
 المسجد الحرام الى المسجد الاقصى الذى باركنا حوله نصر
 من الله لعبده الله و وليه على بن ابي الحسن الامام الظاهر لاعزاز
 دين الله امير المؤمنين صلوات الله عليه و على ابيه الطاهرين
 و ابناءه الاكرمين امر بعملها وهى هذه القبة واذهابها سيدنا
 العزيز الاجل صفى امير المومنين و خالصه ابو القاسم على بن
 احمد ايدد الله و نصره و كمل جميع ذلك الى سلخ ذى
 القعدة سنة ست و عشرين واربع مائة صنعه عبد الله بن الحسن
 المصرى المزوق

GUY LE STRANGE.

KIRJATH-SEPHER.

SURELY we ought not to let this place go unexplored, after the suggestion made by Professor Sayce in the August number of the "Contemporary Review." The recent discovery of cuneiform tablets at Tel el-Amarni, in Egypt—consisting of despatches to Amenophis IV and his predecessor (18th dynasty), from their agents in Palestine—proves that there was active literary intercourse from one end of the civilised East to the other, in the century before the Exodus, and that the medium of literary correspondence was the Babylonian language and script. There were libraries in Canaan in those days, and some of the books were in cuneiform characters. They were of clay, which would not perish like papyrus, and they could be read if they were discovered. Professor Sayce would be hopeful of finding such records at Tyre and at Kirjath-Sepher.

Kirjath-Sepher is translated as Book-town. In the Euphrates valley there was a city of corresponding name—Sippara—and it has justified its designation by yielding (within the present decade) many ancient records.

Sippara was a seat of sun-worship, and its temple contained hundreds of apartments. The legend said that Khasis-adra, the Chaldean Noah, here buried the records of the ante-diluvian world; and at any rate a great library was founded here as early as the remote days of Sargon I, of Assyria (B.C. 3750).

Some people from Sippara were transported to Samaria when the ten tribes were carried away captive, and the city is mentioned in the Bible under the name of Sepharvaim. This is a Hebrew dual form, signifying the "two Sipparas," and, accordingly, the ruins are found on both sides of the stream—at Abu Hubba and at Agadé. I find reason to think that the duality was symbolical, and was important in the astro-religious system, the two sites standing for the two equinoxes. We may compare with these twin temples, or towers, the mound of *Birs Nimroud* and the *Babil* mound on the opposite side of the stream; we may compare again the two "brother" peaks of Delphi, of the like significance, perhaps, in the Greek mythos, which was, at bottom, the same as the Chaldean.

The temple at Sippara was called Beth-el (House of God)—House of the *Sun-god*, apparently, since the expression "Shamash of Sepharvaim" occurs in the cuneiform texts.¹ We might have expected to find Nebo rather—the god of writing—especially as the temple at Borsippa was sacred to him. The first and principal records preserved in the temple would be astronomical records—called "tablets of destiny," because the fixed laws of the heavens governed the fate of men—such records being of prime importance in an astro-religious system. Accordingly, we find

¹ In 2 Kings, xvii, the men of Sepharvaim made images of Ana-melech and Adra-melech, and burnt their children in the fire.

that the treasures of the library of Sargon included a great work on astronomy and astrology in seventy-two books (72, it may be remarked, is an oft-recurring number in mythic writings, because $5 \times 72 = 360$, the number of degrees in the circle of the heavens, and of days in the ancient year). The priestly guardians of these writings, however, being the scribes of the people, would by-and-by be entrusted with the care of the contracts, &c., which they drew up; and so Mr. Rassam discovered, at this site, thousands of tablets relating to fiscal, legal, and commercial transactions.

These, then, are the kinds of records which we may hope to find at Kirjath-Sepher in Judea. The place was very likely the site of a temple of Nebo, or some equivalent god of writing, and the records preserved would be, first of all, astro-religious, and then commercial.

Kirjath-Sepher is otherwise called Kirjath-Sannah, and also Debir. It was one of the Canaanitish towns taken by Joshua, and the worship would relate to that early time; the tablets would belong to the pre-Israelitish inhabitants. In "Fresh Light from the Monuments," Professor Sayce gives the name *Debir* as meaning sanctuary, and compares it with Kadesh, "the holy city." In the "Survey Memoirs" (iii, 402) we are told that "the name has the meaning 'back,' due to its position on the ridge." I have always supposed that the later name, Debir, had the same meaning as the earlier name, Sepher. Dabar, from the same root, signifies a word, speech, saying, command, law, oracle, &c.; and Furst, under the word Debir, allows that it may mean Book-town, the same as Kirjath-Sepher. It comes from *Dabar* (דָּבַר) to speak. Apparently, the root-meaning of Sepher and Sannah is connected with the idea of piercing and being pointed, like thorns or like crags, and may have had reference to the conical hills on which Nebo temples are built, or to the stylus used in writing. The west or hinder part of the temple was called Debir, and in that connection the word is said to mean hinder; but if the sacred books were kept on that side, the name may perhaps have reference to the writings.

Kirjath-Sepher is represented now by the village of *edh Dhâbertyeh*, south-west of Hebron (see Memoirs iii, 402, and Armstrong's "Names and Places," O. T.). The description of it is not unpromising for the investigator—"ancient materials," "an old tower," "a sacred place," and "houses over caves."

GEORGE ST. CLAIR.

MEETING OF THE GENERAL COMMITTEE.

THE Annual Meeting of the General Committee was held at the offices of the Fund, 1, Adam Street, Adelphi, on July 3rd. Chairman, Mr. James Glaisher.

After the Honorary Secretary had read letters from various gentlemen

regretting their inability to attend the meeting, the Report of the Executive Committee for the year was read as follows :—

MY LORDS AND GENTLEMEN,—

Your Committee elected at the last General Meeting, on June 14th, 1887, have, on resigning their office into your hands, to render an account of their administration during the past year.

1. The Committee have held twenty-two meetings during the year.
2. The work of exploration has been carried on during the last year by Herr Schick at Jerusalem, and by Herr Schumacher in other parts of the country.

We had on this occasion of last year to announce the deeply interesting discoveries made at Saida of sarcophagi and rock-cut tombs. We have been enabled to publish a more detailed account of these monuments, partly from Professor Hayter Lewis, who was allowed to see them at Constantinople, partly from the "*Revue Archéologique*," and partly from a journal published in Arabic at Beyrout. Hamdi Bey himself has not yet published any photographs or further details, which it is hoped may shortly be produced.

Several very valuable discoveries have been made in Jerusalem during the year :

(1) The ancient wall at the Jaffa Gate has been proved to be built inside the modern wall, which has no foundations, and stands upon the earth.

(2) One or two small points have been discovered as to the second wall, but its course has not been yet determined. Herr Schick will lose no opportunity of investigating this most important point.

(3) Herr Schick has discovered a Byzantine pavement, which in the opinion of most can be no other than the open space paved and adorned by Constantine in front of his group of Churches. It is of less importance, but it is still interesting to ascertain that on this pavement stood the "Vaulted Street," long lost, described in Crusading accounts.

(4) The most important discovery, however, is that of the Pool of Bethesda :

An apparently uninterrupted chain of evidence from the year A.D. 333 to the year 1180 speaks of the Probatika Piscina as near the Church of St. Anne. The place spoken of, recently believed to have been only a mediæval and traditional site, is said by the earliest writers to have formerly had five porches, then in ruins. Nothing was known of the Pool described by those writers until quite recently, when certain works carried on by the Algerian monks laid bare a large tank, or cistern, cut in the rock to a depth of 30 ft. It lies under, but not immediately under, a later building, a church with an apse at the east end. The cistern is 55 feet long from east to west ; north and south it measures $12\frac{1}{2}$ feet in breadth. A flight of 24 steps leads down into the pool from the eastern scarp of rock.

Now, the first requisite for the site of the pool of Bethesda is that it

should be possible to have five porches. The only way (as shown by Sir Charles Wilson in his notes to the new edition of the "Bordeaux Pilgrim") in which this requisite could be satisfied is that the pool should be what is called a twin pool, such as that discovered close to the Convent of the Sisters of Sion—that is to say, two pools lying side by side, having one portico on each side of the four sides thus formed, and one between them on the wall of separation.

The discovery of the pool at the church of St. Anne did not at first admit of this possibility. It seemed, therefore, to be of interest chiefly as the re-discovery of a mediæval site. But Herr Schick now reports that he has found a continuation of the pool, or, rather, a sister pool, lying end to end, 64 feet long, and of the same breadth as the first.

We are, therefore, able to make out a reasonably strong case for identifying the newly-discovered twin pool with the Pool of Bethesda.

(1) It is undoubtedly the pool pointed out by all the writers, from the 4th to the 12th centuries inclusive, as the *Piscina Probatica*, around which other traditions gathered; as that it was the birthplace of the Virgin Mary.

(2) The five porticoes spoken of by the "Bordeaux Pilgrim" as being then in ruins, could very well have stood here.

In other words, the historical evidence in favour of this site is as strong as that which connects the Holy Sepulchre with the site adopted by Constantine.

In the minds of most, therefore, it will be probably acknowledged that we have here none other than the ancient Pool of Bethesda.

Herr Schumacher continues to send us valuable notes and papers. He reports antiquities and ruins uncovered in progress of excavation at many points at Zimmârin (now called Zicron-Jacob), at Tiberias, at 'Akka, at Rushmia, at Lejjûn, and elsewhere, all tending to prove that the antiquarian wealth of Palestine is below the surface not above it.

We received, in the autumn of last year, from Mr. Flinders Petrie, a loan collection of ethnological casts, representing the races of Syria and other countries, prepared from the sculptures at Thebes. These casts were shown at the Society's exhibition at the South Kensington Museum. A small grant having been made by the British Association towards the expenses of the work, the casts were taken last winter at Thebes by paper moulds; the series was prepared from the moulds in England; and photographs of all the casts were taken. The greater number of the casts represented the Syrian races, with whom the Egyptian monarchs were constantly at war. The characteristic faces of the Hittites, the Amorites, the Arabs, the Judeans, and the inhabitants of many towns of the North of Syria, could here be studied from contemporary portraits; and, moreover, from such a number of examples, that the general type could be seized without the uncertainty of errors of the sculptor. One most prominent result in Palestine was the resemblance of the Judeans to the Amorites (agreeing with the kings of Jerusalem and Hebron being kings of the Amorites, and Ezekiel declaring to Jerusalem

"thy father was an Amorite"), the faces of the former being of exactly the same type of that of the latter, only rather more refined and subtle of expression. Besides these there were sculptures of many other races; the Southern Arabians, who seem to have originated the Egyptian stock; the Libyans, the fair tribes of North Africa, of Aryan type; the Greeks, Sardinians, Philistines, and allied peoples; and some negro races. A mass of trustworthy material was here brought to hand in the most convenient form, for study by the historian and ethnologist. The collection remained on exhibition at South Kensington until the end of the year.

We have translated and presented to subscribers, during the year, Herr Schumacher's "Jaulân," an account of his survey and its results. This we have so printed as to be detached from the *Quarterly Statement*, and bound in a volume similar to Captain Conder's "Tent Work."

We have also, ready to be issued, Herr Schumacher's "Pella," an account of a survey and description of that city and its surroundings. This is also illustrated in the same style, and it will be forwarded to every subscriber who signifies his wish to have it.

We have to thank Mr. Greville Chester for his "Journey from Iskanderûn to Tripoli;" Mr. Guy le Strange for a paper on the Arabic geographers; Mr. St. Clair, Mr. Birch, Mr. Laurence Oliphant, and Dr. Hutchinson, for notes on various points. Major Conder has again proved himself a steady friend and supporter, by contributing many valuable papers.

We have also in the press a paper by the Rev. Dr. Post, of the Medical College, Beyrout, giving an account of the botanical results of a journey to Eastern Palestine. They will be issued in October.

The Enquiry into the Manners and Customs is also in Dr. Post's hands, and he will begin to forward replies on his return to Beyrout in the autumn.

We have at length completed the long-promised "Names and Places," containing all the Old and New Testament names, with their modern equivalents. The whole forms a volume which is of the greatest use to Biblical students.

We are preparing for press, and shall shortly issue, the first volume of a work similar in appearance and size to the "Survey of Western Palestine." It will consist of three volumes with an Index, all abundantly illustrated with maps, drawings, plans, &c.

- (1) The first volume will be Captain Conder's "Survey of Eastern Palestine," as far as that has been undertaken.
- (2) The second volume will consist of M. Lecomte's beautiful drawings, about 900 in number, made for M. Clermont-Ganneau's mission of 1873-1874, with some descriptive text.
- (3) The third will contain Mr. Chichester Hart's "Natural History of the Wâdy 'Arabah."

There will be 500 copies, and no more, of the work. The price of subscription is £7 7s. for the first 250 copies, and £12 12s. for the next 250. The agent, Mr. A. P. Watt, has already received a sufficient

number of promises to warrant the Committee in authorising the commencement of the work.

Mr. Harper, one of the Executive Committee, is engaged upon a popular work, which, though it will not be published by us, will have our hearty good wishes. It is an account of the light thrown upon the Bible by all the recent excavations and surveys. We have placed at his disposal all the assistance in our power.

The Balance Sheet for the year 1887 is as follows :—

BALANCE SHEET FOR THE YEAR ENDING 31ST DECEMBER, 1887.

RECEIPTS.				EXPENDITURE.			
		£	s. d.			£	s. d.
Balance, 31 st Decem-ber, 1886		322	11 0	Management		407	5 7
Donations, Subscrip-tions and Lectures	1,572	9 11		Exploration		647	14 0
Maps and Memoirs ..	280	10 4		Printers and Binders ..		942	4 0
Books.. ..	369	10 3		Maps and Memoirs ..		337	3 7
Photographs	5	1 5		Balance, December 31 st , 1887.. ..		215	15 9
		<u>£2,550</u>	<u>2 11</u>			<u>£2,550</u>	<u>2 11</u>

The Secretary, Mr. Walter Besant, who had for some time given his services gratuitously to the Society, has found it impossible to continue them, and has, therefore, resigned, but he has consented to remain as Hon. Sec., and we have appointed Mr. George Armstrong as Assistant Secretary. The management expenses of the Society are kept down by this change, and it is hoped that the efficiency of the office will not be in any way lowered.

We have to propose as members of the General Committee the following :—

General Sir F. Goldsmid, K.C.S.I.,
 Professor Greenwood, of "The Owens College," Manchester,
 Halford J. MacKinder, M.A., F.R.G.S.,
 Rev. E. W. Bullinger, D.D.
 Rev. George E. Post, M.D., M.A., of the Medical College,
 Beyrout.

In conclusion, we have to assure the General Committee and our Subscribers generally that all the steps necessary to ensure continuation of the work on its present lines have been taken—that is say, no opportunity will be lost of making researches and following up discoveries in the Holy City, and every possible agency will be brought to bear in the prosecution of research in the Holy Land itself and the countries which surround it.

We have to express our best thanks to the local Hon. Secretaries, and to all who have helped to extend the knowledge of our existence and

aims, and even claims, to larger and more general support. The income of the Society is barely equal to the demands upon it, and while we are continually paying off the liabilities caused by the printing of papers and results, more reports continually arrive which call for immediate publication.

It was proposed by Mr. Guy le Strange, and seconded by Professor Hull, that the Report be received and adopted. This was carried unanimously.

It was proposed by Professor Hayter Lewis, and seconded by Mr. Morrison, that the following gentleman be elected members of the General Committee :—

General Sir F. Goldsmid, K.C.S.I.,
 Professor J. G. Greenwood,
 Halford J. MacKinder, Esq., M.A., F.R.G.S.,
 Rev. E. W. Bullinger, D.D.
 Rev. George E. Post, M.A., M.D.

This was carried unanimously.

It was proposed by Mr. Maudslay, and seconded by Mr. Guy le Strange, that the Executive Committee be re-elected, with the addition of Mr. Walter Besant. This was carried unanimously.

The following paper was read by Professor Hull :—

Geological investigation has made considerable progress in the regions adjoining Palestine, both to the north and west and south, since the publication of the "Geological Memoir on Arabia Petrea and Palestine."

1. The work of Dr. Carl Diener, of Vienna, entitled "Grundlinien der Physischen Geographie und Geologie von Mittel Syrien," Wien, 1886. This is certainly the most important work which has yet appeared on the geology of the Lebanon, as the author has not been content merely with an outline of the formations, but has produced a detailed map showing the geological structure of the region lying between Beirût and Damascus, and reaching as far south as the Lake of Merom.

2. Then there are the excellent papers of Herr Schumacher on the region of the Jaulân and part of the Haurân, extending from the Jordan Valley to the neighbourhood of Damascus, accompanied by an excellent topographical map in which the old volcanic craters and lava-streams are clearly delineated ; together with other physical phenomena of that remarkable region.

3. Then there is the remarkable work of Mr. Doughty on "Arabia Deserta," in two volumes, in which it is shown that the great Arabian Desert, lying to the east of Moab and Edom, is largely occupied by extinct volcanic cones and lava-streams, similar to those which are found in the Jaulân and Haurân. There can be little doubt but that these volcanoes were in active eruption during the same period as those in Northern Palestine and Syria, and that they died out and became extinct at, or about, the same epoch, so that it would appear that the whole

region lying to the east of the Jordan-Arabah Valley, and stretching from the base of Hermon for several hundred miles into the Arabian Desert, was the scene of active volcanic operation in the Pliocene, and perhaps in the Post-Pliocene epoch.

It was proposed by Professor Hayter Lewis, and seconded by Dr. Ginsburg, that the best thanks of the General Committee be awarded to Mr. Walter Besant on his resigning the office of Secretary.

It was proposed by Mr. Maudslay, and seconded by Professor Hull, that the best thanks of the Committee be passed to the Chairman, Mr. James Glaisher.

The proceedings then terminated.

NEHEMIAH'S WALL AND THE ROYAL SEPULCHRES.

THE following is an abstract of a Paper read by Mr. George St. Clair, Lecturer to the Society, at the recent meeting of the British Association at Bath :—

The topography of Ancient Jerusalem has been difficult to make out, and the site of the sepulchres of the kings of Judah remains unknown. But the problem has been simplified by recent excavations. We now, for the first time, know the contours of the rock and the features of hill and valley before the 80 ft. of *débris* began to accumulate.

The Akra of the Maccabees being identified, it is seen how by the recorded filling up of the Asmonean valley the two parts of the Lower City became joined into one *crescent*, lying with its concave side towards the Upper City, according to the description of Josephus.

The investigations of Sir Charles Warren show that the Temple must be placed on the summit of Moriah, with Solomon's palace south-east of it, leaving a vacant square of 300 ft., where now we leave the south-west corner of the Harem Area.

From the south-east corner of the Haram enclosure extends the wall of Ophel, discovered by Warren, running 76 ft. to the south, then bending toward the south-west. Further, it is found that from the Gate of the Chain, in the west wall of the Haram enclosure, a causeway, with complicated structures, extends westward towards the Jaffa Gate.

Having this groundwork we may proceed to place the walls :—

The 3rd wall, built by Agrippa, does not concern us.

As regards the 2nd wall, it suffices for the present purpose to adopt the line of Herr Conrad Schick.

The 1st wall was the wall of the Upper City. On the northern side it ran from the Jaffa Gate to the Haram wall. The uncertainty has been about its southern portion. The author gives, on a diagram, the line he has been led to adopt ; and then shows that it corresponds in detail with the descriptions in the Book of Nehemiah.

Taking Nehemiah's night survey ; then the consecutive allotments of work assigned to those who repaired the walls ; and thirdly, the points successively reached and passed by the processionists when the walls were dedicated—it is shown that every mention of a gate or a tower, the number and the order of salient and re-entering angles, and every other note of locality, exactly agree with the course of the walls as suggested.

This course, moreover, involves the least possible variation from the present line of walls, and more in the way of addition than of deviation.

The hypothesis commending itself as true, by corresponding minutely with Nehemiah's descriptions, by tallying exactly with other Biblical references, and by meeting all the requirements of the case, it has this important practical bearing, that it indicates the site of the royal sepulchres, of the stairs of the City of David, of "the Gate between two walls," &c., and shows, incontestably, that Zion included the eastern hill.

In the author's plan, exhibited, the south wall of the Upper City crosses the ridge of the hill in the line of the present wall, and then makes a bay up the Tyropœan.

A cross wall, to the Ophel hill (also in the line of the present wall), is the wall of the Pool of Shelah, and terminates in steps, ascending and curving round towards the Triple Gate, which is regarded as the Water Gate. The royal sepulchres are on the north side of the wall of Shelah, excavated in the hill of Ophel, the entrance being close to the south-west corner of the buildings which stand out to the south of the Double Gate.

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